Symposium Call Center Server

Platform Vendor Independence Base Configuration Guide

Product release 4.0 Standard 1.0 November 2000

NORTEL NETWORKS™

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Symposium Call Center Server

Platform Vendor Independence Base Configuration Guide

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Chapter 1

Getting started with the installation

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Overview

Introduction

The *Platform Vendor Independence Base Configuration Guide* provides information and instructions for installing and maintaining a third-party Windows NT server for Symposium Call Center Server Release 4.0. The guide also covers any troubleshooting problems that might arise.

Platform Vendor Independence is a software-only call center solution, which allows Symposium Call Center Server to operate on hardware that is not supplied by Nortel Networks. The software is designed to run on any system that meets the minimum hardware requirements for Windows NT 4.0, using Microsoft-certified drivers for all components.

This chapter provides the standard requirements and precautions for handling, installing, and servicing hardware equipment. It also describes the minimum hardware requirements for the server.

Who should read this guide

This guide is for planners, administrators, technicians, and engineers responsible for installing and maintaining the server. It is intended to act as a guide for installing, repairing, replacing, and upgrading hardware and software components. It assumes that the reader has basic computing skills, is familiar with necessary safety procedures, and has the hardware documentation provided by the manufacturer available as a reference.

Assumptions

This guide assumes that you are planning to install and maintain or troubleshoot the third-party Windows NT server.

Using this guide to configure a Network Control Center server

When Symposium Call Center Server sites are connected together in a Wide Area Network (WAN), they require a central, non-call-processing computer to control the network. This computer is known as the Network Control Centre (NCC) server. All Symposium Call Center Servers are connected to the NCC server, which can be located at the same site as one of the servers in the network.

This guide explains the configuration of a third-party Windows NT server for Symposium Call Center Server Release 4.0. If you are configuring a third-party Windows NT server as an NCC server, you can use the procedures in this guide to install and configure the NCC server, with the following changes:

- The NCC server does not have an Embedded LAN (ELAN) card installed. Ignore all references to ELAN installation and configuration in this guide.
- The NCC server requires that you install a Performance Enhancement Package (PEP) after the Symposium Call Center Server software is installed. For details, see the *Symposium Call Center Server Software Installation and Upgrade Guide*.

Skills you need

Purpose

This section describes the skills and knowledge you need to use this guide effectively.

Nortel Networks product knowledge

Knowledge of, or experience with, your Windows NT server or the following Nortel Networks products is helpful when administering the server:

- 701t server
- 702t server
- 1000t server
- 1001t server
- 1003t server

PC experience or knowledge

Knowledge of, or experience with, Microsoft Windows NT Server 4.0 is helpful when administering the server.

Other experience or knowledge

Other types of experience or knowledge that might be useful include

- client/server architecture
- Internet Protocol (IP)
- database management
- programming

Installation safety precautions

Introduction

Before you install the server, take safety precautions to avoid injury or damage to you and the server. Precautions made now make the task of installing or maintaining the server much easier.

Site safety

Prior to installing your server, verify that:

- the area is clean and clear of debris
- there is adequate space for all equipment
- a desk, shelf, or table space is available for the server, monitor, keyboard, mouse, and modem
- there is adequate air flow and ventilation around the equipment
- no heat sources are located near equipment
- there is space for access to the front, side, and rear panels of the server
- the area is isolated from strong electromagnetic fields and electrical noise sources including
  - air conditioners
  - large fans
  - motors
  - radio or TV transmitters
  - high-frequency security devices
- there are adequate grounded electrical outlets or power bars for all equipment. Have one outlet for each
  - server
  - monitor
  - modem power cord
  - Embedded LAN (ELAN) hub power cord
  - Customer LAN (CLAN) hub power cord
  - PC client

Equipment requirements

Introduction

The Platform Vendor Independence (PVI) solution for Symposium Call Center Server Release 4.0 is a software-only product. The customer can supply the server and all hardware. You can install Symposium Call Center Server Release 4.0 on any server platform that meets the minimum recommended hardware requirements outlined in this section. The server must also meet the requirements of Microsoft's Hardware Compatibility list for Windows NT Server 4.0.

Platforms supported

Symposium Call Center Server Release 4.0 as a Platform Vendor Independence solution supports hardware that meets a minimum requirement, regardless of the manufacturer. To check whether a particular server can be used, run the PVI Minimal Configuration Compliance Check utility on that server after the operating system is installed and the drives are partitioned. This utility generates warnings and suggestions when the server under test does not satisfy the minimum or suggested requirement.

In addition to hardware that is not supplied by Nortel Networks, you can use the Platform Vendor Independence solution with certain Nortel Networks platforms. In the case of a new installation, the Nortel Networks platform is considered to be supplied by an independent vendor (Nortel Networks). You can install the Symposium Call Center Server Platform Vendor Independence solution only after the minimal or recommended hardware configuration has been met. For Meridian Application Server platforms, this document supersedes earlier installation procedures.

Minimum hardware requirements

For the Release 4.0 Platform Vendor Independence solution to run properly, the customer-supplied server must meet the following minimum requirements:

- Intel-based CPU—Pentium II 300 Mhz

- Symposium Call Center Server Release 4.0 can operate on single or dual processors at this time. Quad processors are not supported.

- 256 Mbytes of RAM memory
- one floppy drive
  - The drive letter must be A.
- SCSI bus for hard drives

Note: IDE hard drives are not supported due to call center performance issues.

- RAID1 hardware to be used for all disks on the shared SCSI bus to eliminate disk drives as a potential single source for hardware failures. This is a recommendation.
- hard drive speed of 7200 rpm (minimum) from manufacturer's specification

Note: For additional partitioning information, see "Disk partitioning for new installations" on page 22.

- first partition (to contain Windows NT Server 4.0)
  - The disk partition letter must be C.
  - The minimum partition size is 2 Gbytes.
  - The recommended partition size is 4 Gbytes.
  - The file system type is NT file system (NTFS).
- second partition (to contain Symposium Call Center Server 4.0)
  - The disk partition letter must be D.
  - The minimum partition size is 2 Gbytes.
  - The recommended partition size is 4 Gbytes.
  - The file system type is NTFS.
- one CD-ROM drive
  - The drive letter must be E.
  - Minimum speed is 24X.
- first database partition
  - The disk partition letter must be F.
  - Minimum partition size is 4 Gbytes.
  - The file system type is NTFS.

- additional database partitions
  - The disk partition letters are G to Z.
  - Minimum partition size is 1 Gbyte.
  - All additional DB partition sizes should be on 1 Gbyte increments.
  - The file system type is NTFS.
- two serial ports
- one parallel port

Note: If you use a smart UPS that requires an additional serial port on the server platform, you also need the additional serial port.

- two network interface cards (10/100 Mbytes/sec. Ethernet)
- video card and monitor (800x600 minimum resolution)
- keyboard
- mouse
- US Robotics Modem 33.6 kbytes/sec minimum, for remote technical support (required)
- backup tape drive for the backup and restoration of the Symposium Call Center Server database (required). The customer must ensure that the tape drive chosen can hold all the backup data for the complete database on a single backup tape. Hardware compression techniques can be used if necessary. An SLR tape drive from Tandberg is recommended.
- capability of operating under Windows NT Server 4.0. All hardware devices must be on the Microsoft Hardware Compatibility list for Windows NT Server 4.0. For a complete list of compatible hardware devices, check the following web site:

http://www.microsoft.com/hcl/default.asp

Required setup data

Introduction

Use the information that you record in this section for the initial Windows NT configuration.

Data

The following data is required for certain procedures:

Name	Required information
customer's company name	
company representative's name	
computer name	(6–15 characters, first character must be alpha, only alphanumeric and underscore characters allowed, no spaces allowed)
workgroup name	
administrator password	
type of modem for the server	
Windows NT Server 4.0 licence key	

In addition, the following information is required:

- user name, password, and domain name for access to the Customer Local Area Network (CLAN)
- list of unique names and IP addresses for all equipment on both CLAN and ELAN

See "IP Addresses" on page 10.

Serial number

When Windows NT Server 4.0 is installed, you must enter an individually licensed serial number (Product ID). This serial number is provided with each copy of Windows NT software.

IP addresses

Record the server's IP addresses for both ELAN and CLAN connections. The customer's LAN administrator is the source for IP addresses, subnet masks, and gateways.

IP address table

Name	IP address	Subnet mask	Gateway, description, equipment name, or comments
ELAN M1 Primary			
ELAN M1 Secondary			
ELAN server			
ELAN router/ gateway IP address			
CLAN server			
CLAN router/ gateway IP address			
RAS			

MAC addresses

Record the MAC address for both ELAN and CLAN cards. If the ELAN and CLAN card types are identical, the MAC address can help you identify each card for testing and configuration purposes.

MAC address table

Slot number	Card type	MAC address
	ELAN	
	CLAN	

Preparing for hardware activities

Introduction

The Symposium Call Center Server Release 4.0 Platform Vendor Independence solution is a software-only product, with hardware that can be supplied by the customer, or already in place including non-Nortel Networks supplied servers. This guide covers the installation and connection of equipment including the ELAN, CLAN, tape drive, modem, and dongle (when connected to a DMS/MSL-100 switch). It also covers the installation of Windows NT Server 4.0 and the configuration of the server. Software installation is covered in the *Nortel Networks Symposium Call Center Server Software Installation and Maintenance Guide* for Release 4.0.

Hardware activities include installing the server according to the manufacturer's manuals and connecting it to peripheral equipment. Before you begin any of these activities, collect the tools you need and follow recommended safety precautions.

You need the materials and precautions covered in this section for the hardware connection and server configuration.

Required materials and safety precautions

Materials checklist

Use this checklist for the materials you need to perform maintenance and diagnostics tasks.

Check	Description
	Antistatic ESD wrist strap (recommended)
	Pen or pencil for writing notes, cable lengths, and cable identifications
	Cable tie wraps
	Blank tape for database backup procedures (used with Symposium Call Center Server procedures)
	Head-cleaning tape kit
	Cable identification labels
	Equipment log (records the model and serial number of the system, all installed options, and other information)
	Blank floppy disk to create a Windows NT repair disk (will contain backup configuration data for Windows NT)
	Microsoft Windows NT Server 4.0 CD-ROM
	pcAnywhere software - supplied (provides remote access by Nortel Networks service)

General safety

Nortel Networks recommends that you observe these safety guidelines as you work on your server:

- Plug the computer and peripheral devices into properly grounded power sources to prevent electric shock.

- Use surge protection and an uninterruptible power supply to protect your system from sudden increases and decreases in electrical power.
- Ensure that nothing rests on your server's cables and that cables cannot be tripped over or stepped on.
- Do not handle food or liquid around the server.
- Do not push any objects into the openings of your server.

Safety precautions for working with your server

Follow the manufacturer's recommendations and observe these safety guidelines before removing the cover of your server:

1. Turn off all peripheral devices connected to the server.
2. Turn off the system by using the push-button on/off power switch. Unplug the AC power cord from the system or wall outlet.
3. Label and disconnect all peripheral cables and all telecommunication lines connected to the I/O connectors or ports on the back of the system.
4. Provide electrostatic discharge (ESD) protection by wearing an antistatic wrist strap attached to the chassis ground of the system when handling components. Attach your wrist strap to any unpainted metal surface.

Cooling and airflow

Check the manufacturer's instructions for proper cooling and airflow. Always install the chassis top cover before turning on the system. You may risk damaging system parts if you operate the system without the cover in place.

Uninterruptible Power Supply

Benefits

Nortel Networks recommends the use of an Uninterruptible Power Supply (UPS) with the Symposium Call Center Server. A UPS provides the following benefits:

- reduction in data loss—A UPS shuts down the server gracefully if an interruption in AC power occurs. A graceful shutdown prevents data corruption and reduces the risk of data loss.
- reduction in power dips and spikes—The UPS regulates AC power supplied to the server.

Note: Data backups that are running at the time of shutdown are unusable.

Requirements

A UPS used with the Symposium Call Center Server must meet the following requirements:

Requirement	**4**
Provides at least 10 minutes of power, to stop all services and shut down the server	
Physically fits within the workplace	
Has minimal environmental impact	
Applies power to the server when line voltage reaches a stable state	
If the server has been down for a long time, recharges before powering up the server	
Is compatible with Windows NT 4.0 Server	

Requirement	4
Meets all local regulatory requirements **Note:** For the European market, the UPS must generate a pure sine wave AC waveform.	
Has hot-swappable batteries **Note:** Replacement or capacity upgrades of the batteries must not interrupt service.	
Connects to the server through a serial port on the server platform or through a network card, depending on the implementation	
Does not affect the Symposium Call Center Server software. UPS software must not replace software or drivers installed on the server with different versions. **Note:** Install only the basic software functions necessary for UPS operation. Do not install advanced features, as they could impact the Symposium Call Center Server software.	

Avoiding electrostatic discharge

Introduction

Electrostatic discharge (ESD) can seriously damage component parts such as disk drives and boards. Nortel Networks recommends that you perform the maintenance procedures described in this section at an ESD workstation.

Antistatic wrist strap

If an ESD workstation is not available, you can wear an antistatic wrist strap for ESD protection. Ground the ESD wrist strap by attaching it to any unpainted surface on your system's chassis.

Conductive foam pads

Expansion cards are extremely sensitive to ESD. After removing a card from its protective wrapper or from the system, place it component-side up on a conductive foam pad. If possible, use antistatic floor pads and workbench pads.

Chapter 2

About the server

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Overview

Introduction

This section provides a summary of the server's configuration and software components.

Included are descriptions of the following elements:

- approved peripherals
- operating system
- pcAnywhere
- disk partitioning
- requirements for troubleshooting and maintenance
- RAID controller
- dependencies and compliance

Server configuration

Approved peripherals

The following peripherals are necessary to allow the server to work properly.

Keyboard, monitor, and mouse

The server does not support headless operation; therefore, a keyboard, monitor, and mouse must be connected to the server.

Floppy drive

One floppy drive is required in the server. You need the floppy drive for some software installation and related procedures.

CD-ROM drive

One CD-ROM drive is a minimum standard requirement for the server. You need this drive for software installation and configuration procedures.

Tape drive

One tape drive is required for the server. You need this drive to save and store data.

SCSI drives

SCSI hard drives in primary and secondary hot-pluggable drive bays are recommended for redundancy. A Redundant Array of Independent Disks (RAID) arrangement combines two or more drives for fault tolerance and performance.

Modem

A dial-up modem must be connected to the server through a serial port at the rear of the chassis.

Network interface cards

Two Ethernet network interface cards are required—one for connection to the Embedded Local Area Network (ELAN) and the other for connection to the Customer Local Area Network (CLAN).

Operating system

The Symposium Call Center Server Release 4.0 Platform Vendor Independence solution requires the Microsoft Windows NT Server 4.0 operating system.

The minimal Service Pack is 6a.

Note: The service pack must be applicable to your region as well as your server. In North America, 6a is the latest service pack recommended by Nortel Networks. Not all service packs are compatible with all servers. See the server vendor for recommendations.

pcAnywhere

Nortel Networks requires that pcAnywhere 9.2 be installed on the server to provide Symposium Call Center Server support through a dial-in modem.

Disk partitioning for new installations

2 Gbytes=2048 Mbytes
4 Gbytes=4096 Mbytes

Drive letter	Minimum size	Recommended size	Notes
A	1.44 Mbytes	1.44 Mbytes	Floppy drive A
C	2 Gbytes	4 Gbytes	NTFS partition on disk 0. This must be partitioned as the Primary partition. MS Windows NT Server 4.0 and pcAnywhere are installed here.
D	2 Gbytes	4 Gbytes	Additional NTFS partition on disk 0 or an NTFS partition on a different disk. This must be partitioned as an Extended partition. Symposium Call Center Server is installed here.

Drive letter	Minimum size	Recommended size	Notes
E	N/A	N/A	CD-ROM drive
F–Z	4 Gbytes		Drive F and any additional drives should be on a separate physical disk other than drives C and D. At a minimum, there must be an F drive where database information is stored. The minimum total system disk space for the database is 4 Gbytes. This is critical for the F partition. Additional database disk drive partitions can be on separate physical disks or on the same disk, depending on the customer's preference and hardware configuration. Partitioned sizes on all database drives should be in increments of 1 Gbyte. Drives F–Z must be partitioned as Extended partitions.

Disk partitioning for 702t server installations

Use the following disk partitioning information for rebuilding a Nortel Networks 702t server that is configured for Platform Vendor Independence.

Notes:

- All partitions use NTFS formatting.
- The following partitioning information is based on a 702t server with a 9 Gbyte hard drive system:

Disk number	Drive letter	Partition type	Partition size
0	C	Primary	4095 Mbytes
0	D	Extended	4095 Mbytes
1	F	Extended	4087 Mbytes
1	G	Extended	4095 Mbytes
2	H	Extended	4095 Mbytes
2	I	Extended	4087 Mbytes

Disk partitioning for 1003t server installations

Use the following disk partitioning information for rebuilding a Nortel Networks 1003t server that is configured for Platform Vendor Independence.

Note: All partitions use NTFS formatting.

Disk number	Drive letter	Partition type	Partition size
0	C	Primary	4095 Mbytes
0	D	Extended	4095 Mbytes
1	F	Extended	4095 Mbytes
1	G	Extended	4095 Mbytes
2	H	Extended	4095 Mbytes
2	I	Extended	4095 Mbytes

Base and optional system components

Included software components

The Symposium Call Center Server Release 4.0 Platform Vendor Independence solution is packaged as a software solution only; no hardware platforms are included. The package includes the following software:

- Server CD-ROM containing
  - Symposium Call Center Server installation software
  - PVI Minimal Configuration Compliance Check utility
- Server Supplementary CD-ROM containing
  - any additional software components required for Symposium Call Center Server to operate, such as performance enhancement packages (PEPs)
- Platform Support CD-ROM containing
  - pcAnywhere 9.2
  - Microsoft Windows NT Server 4.0 Service Pack 6a
  - Adobe Acrobat Reader 4

Note: In addition to the included software components, you need the Microsoft Windows NT Server 4.0 operating system. If the customer provides the server, the vendor can supply the operating system. If a supplier provides the server, the vendor can supply the operating system. If Nortel Networks provides the server, Nortel Networks supplies the operating system.

Requirements for troubleshooting and maintenance

The following components are essential to perform diagnostics, installation, and maintenance procedures:

- Windows NT 4.0 setup disks and CD-ROM
- Windows NT 4.0 service pack 6a
- manufacturer’s RAID controller driver disk, if a RAID controller is used
- manufacturer’s diagnostics software

- blank backup tape for execution of tape diagnostics
- platform-specific information disk
- firmware update disk from the manufacturer

RAID controller

Nortel Networks recommends that the server contain a RAID1 (type 1) controller. The Redundant Array of Independent Disks (RAID) technology provides disk data redundancy as well as error detection and correction. With the RAID controller, you can configure your linked drives into a RAID subsystem.

Dependencies and compliance

BIOS and hardware dependency

The Platform Vendor Independence solution does not have any dependencies on the server's BIOS or hardware.

Operating system service pack dependency

The minimum requirement is Service Pack 6a. Any new Microsoft Windows NT Server 4.0 service packs are subject to Nortel Networks approval and recommendations.

Desktop Management Interface (DMI)

You must remove any pre-installed vendor's version of DMI before configuring the server.

Compliance utility

The PVI Minimal Configuration Compliance Check utility checks the server for minimum requirements. The utility checks the following elements:

- the operating system
- disk partitioning and sizes
- RAM size

For additional information, see "PVI Minimal Configuration Compliance Check utility" on page 110.

Chapter 3

Installing Symposium Call Center Server-specific hardware

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Overview

Introduction

This chapter describes how to connect external and peripheral hardware components to the server. Before these components can be connected, you must install the server hardware according to the manufacturer's instructions and recommendations.

The following external connections are required:

- a network connection to the Meridian 1 or DMS/MSL-100 switch
- a network connection to the Symposium Call Center Server Release 4.0 client
- a feature key adapter (dongle) installed on the parallel port. The feature key adapter is supplied by Nortel Networks for a server in Symposium Call Center Server that is connected to a DMS/MSL-100 switch. It is used only when the server is used for Symposium Call Center Server applications.
- a serial connection with Meridian Mail (only when the server is connected to a Meridian 1 switch)
- a serial connection to a US Robotics modem for remote support

This section provides information and procedures for

- connecting the ELAN
- connecting the CLAN
- installing the software feature key adapter
- connecting Meridian Mail with a serial port
- connecting the modem
- connecting the backup tape drive

Connecting the ELAN

Introduction

An Embedded Local Area Network (ELAN) card is a minimum system requirement. It is the private LAN used to connect Nortel Networks equipment at the customer site. The Ethernet hub is supplied by the customer.

To connect the ELAN

1. Locate the slot assigned to the ELAN card for the server. Make a note of the slot. See the “MAC address table” on page 11.
2. Write the MAC address of the card on a small label and attach the label to the back of the card or the chassis slot position.
3. Connect the ELAN network cables from the Nortel Networks equipment to the Ethernet hub.
4. Connect the LAN cable from the ELAN card in the server to the hub.
5. Plug in the power cord for the hub.

Connecting the CLAN

Introduction

The Customer Local Area Network (CLAN) card is used to connect Nortel Networks systems to the customer's internal Ethernet LAN.

To connect the CLAN

1. Locate the slot assigned to the CLAN card for the server. Make a note of the slot. See the "MAC address table" on page 11.
2. Write the MAC address of the card on a small label, and attach the label to the back of the card or the chassis slot position.
3. Connect the cable from the CLAN to the CLAN card in the server in accordance with customer site networking guidelines.
4. Plug in the power cord for the hub.

Connecting the software feature key adapter

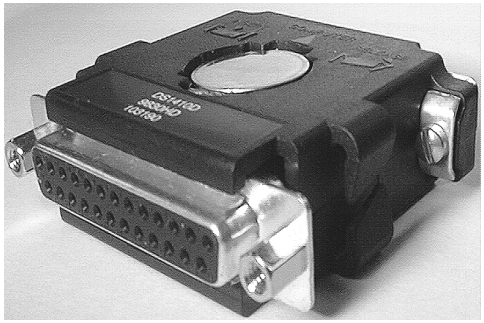
Introduction

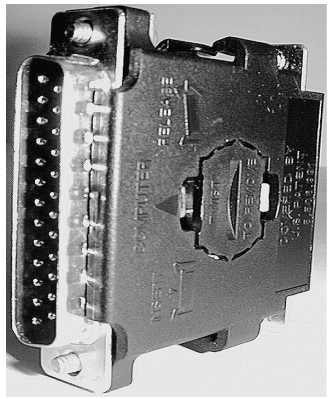
The Symposium Call Center Server installation package includes a software feature key adapter containing a feature key or dongle. This device verifies that you have the software package that was purchased for this system. You can set up and test Symposium Call Center Server without the adapter. However, before you connect to the switch to go live, you must ensure that the adapter and dongle are attached to the parallel port. Without the dongle, the switch and the server cannot communicate.

The software feature key is a security device that stores the server's unique serial number. The serial number is embedded in the dongle, which is fitted into the feature key adapter, and plugs into the parallel port.

Note: The dongle is only used for Symposium Call Center Server applications when the server is connected to a DMS/MSL-100 switch.

Nortel Networks software feature key adapter





Tools required

- Phillips No. 1 screwdriver

To install the software feature key adapter

1. Ensure that there is no cable connected to the parallel port.

   Note: The parallel port is also known as the printer port or LPT1. It is located at the rear of the chassis.

2. Plug the male end of the adapter into the parallel port. The male end of the adapter is shown in the picture on the right of the previous page.

Connecting Meridian Mail with a serial port

To connect Meridian Mail

This connection is used in place of the software feature key adapter when the server is used for Meridian Mail only. This connection is the Access Link that is used for interactive voice response, or for forwarding calls to Meridian Mail.

1. Plug the null modem adapter and RS-232 serial cable from the Meridian Mail COM port into the COM2 port on the server.
2. When the operating system is installed, ensure COM2 is set to 9600 bps.

   Result: The connection to Meridian Mail is complete.

Connecting a modem

Introduction

An external modem connected to a serial port on the server provides connectivity for technical support personnel. Use this procedure to connect the modem.

To connect the modem

1. Ensure that the AC cord of the modem is not plugged in.
2. Connect the large 25-pin male connector to the back of the modem. Tighten the connector screws.
3. Connect the 9-pin female connector to COM1 at the rear of the server. Tighten the connector screws.
4. Check that the modem switches are set as follows:

   Note: The following table shows switch settings for the recommended US Robotics Sportster 33.6 modem. Use these settings as a guide to the features required if you are installing a different type of modem.

Switch position	Up (OFF)	Down (ON)	Function
1	n		Normal DTR operation (The computer must provide a DTR signal for the modem to accept commands. Dropping DTR terminates a call.)
			Modem ignores DTR (override)
2	n		Verbal (word) results
			Numeric results
3			Suppress results codes
		n	Enables results codes

Switch position	Up (OFF)	Down (ON)	Function
4			Echo keyboard commands
		n	Suppress echo of keyboard commands
5			Modem answers on first ring, or higher if specified in NVRAM
		n	Disables auto answer
6	n		Modem sends Carrier Detect when it connects with another modem; drops Carrier Detect on disconnect
			Carrier Detect is always on (override)
7	n		Loads Y or Y1 configuration from user-defined nonvolatile memory (NVRAM)
			Loads &F0-Generic template from read-only memory (ROM)
8			Disables command recognition (dumb mode)
		n	Enables command recognition (smart mode)

5 Connect one end of the telephone cable to the modem RJ-11 jack labeled LINE.

6 Connect the other end of the telephone cable to the RJ-11 jack in the wall.

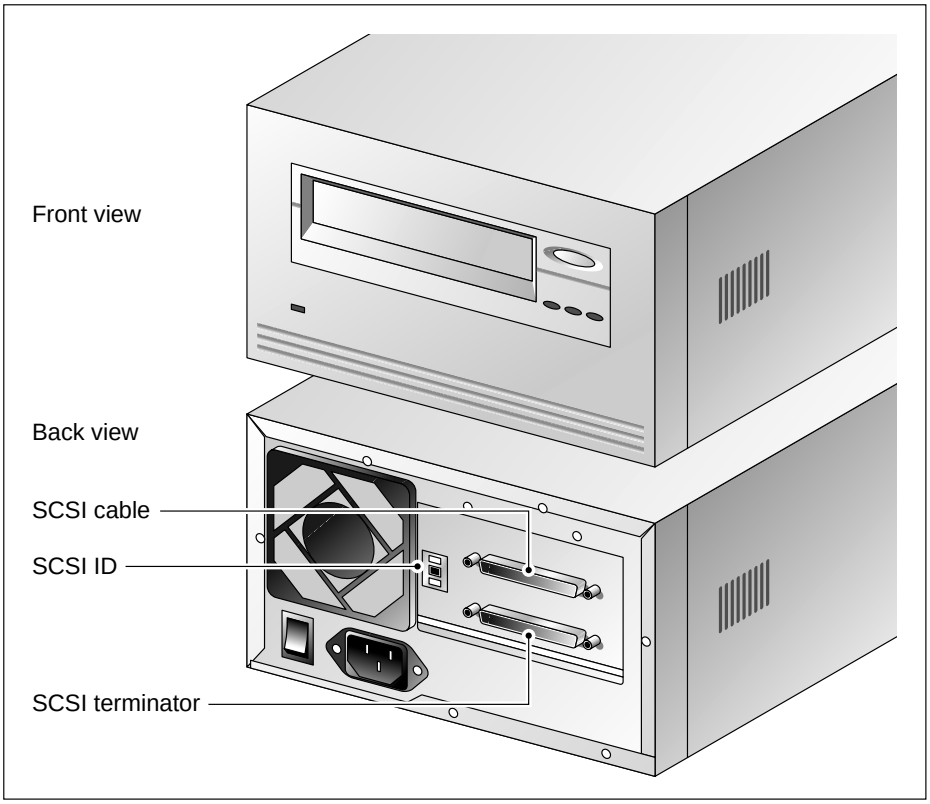
7 Connect the power cord to the modem and plug the other end into a wall receptacle or power bar. Turn on the modem.

Connecting a backup tape drive

Introduction

A tape drive for backing up and restoring data is a minimum system requirement. The tape drive can be internal or external to the server, depending on the server manufacturer, and is connected through a SCSI bus. The recommended tape drive is an external Tandberg SLR32, which is a wide SCSI-2 device.

Tandberg SLR32 tape drive



G101564

To connect a tape drive

Install the tape drive according to the server or tape drive manufacturer's instructions, and check the following conditions:

1. Ensure the tape drive's SCSI ID is set to the server manufacturer's instructions and recommendations.
2. If the tape drive has parity checking as an option, ensure that parity checking is enabled on the tape drive.
3. Check that the tape drive is configured to enable termination for its SCSI channel.

To install a Tandberg SLR32 tape drive

1. Place the tape drive in a convenient location.
2. Turn off the power to the server.
3. Connect a SCSI cable to the top connector on the back of the tape drive.
4. Connect the other end of the SCSI cable to the SCSI connection on the server. This can be the connector on the SCSI card on the back panel of the server, or a built-in SCSI adapter. Check the server manufacturer's instructions for details.
5. Connect a SCSI terminator to the bottom connector on the back of the tape drive.
6. Use a small object such as a paper clip to press the buttons above or below the SCSI ID window until the manufacturer's recommended SCSI ID appears in the window.
7. Connect a power cord to the tape drive and plug the other end into an appropriate AC outlet. Turn on the tape drive.
8. Turn on the power to the server.

To continue the server installation, go to Chapter 4, "Configuring the server."

Chapter 4

Configuring the server

In this chapter

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Overview

Introduction

This chapter describes how to configure the server from a new system (that is, blank disk drives). This chapter also describes how to configure the server for Symposium Call Center Server installation.

The procedures in this chapter can be used as recovery procedures in the event of a system failure. Some procedures are necessary only if all base software must be reinstalled as a failure recovery procedure.

Prerequisites

Hardware

The server must have all hardware installed as described in Chapter 3, “Installing Symposium Call Center Server-specific hardware.”

Desktop Management Interface

If a new platform has the vendor’s operating system preloaded and Desktop Management Interface (DMI) installed, you must uninstall the vendor’s version of DMI. Alternately, you can reinstall Windows NT Server 4.0 without DMI as described in the following sections of this chapter, and repartition the hard disks to ensure compatibility with Symposium Call Center Server 4.0. If you install a vendor’s operating system CD, you must not install the vendor’s version of DMI as it can cause problems when Symposium Call Center Server installs its own DMI.

Installing Windows NT Server 4.0

Introduction

If Windows NT Server 4.0 is not already installed, use the procedures in this section to install the operating system:

- To install the Windows NT Server 4.0 operating system
- To format a SCSI backup tape drive
- To set up a CD-ROM or DVD-ROM driver
- To format the hard drive
- To configure the server for network use
- To install the ELAN and CLAN card drivers
- To install protocol and network services
- To install the modem driver
- To continue the Windows NT Server 4.0 installation

When Windows NT Server 4.0 is installed, use the remaining sections in this chapter to format the hard drives and to install pcAnywhere:

- To install the Windows NT Server 4.0 service pack
- To uninstall the Microsoft Internet Information Server
- To format the remaining hard drives
- To install the tape device driver
- To configure the virtual memory
- To configure the modem for remote access service
- To install pcAnywhere
- To perform standard procedures such as
  - logging on
  - changing the password
  - changing the maximum password length
  - changing the computer name
  - changing the workgroup name

- To set communication protocols

Services

For full functionality, the following services should be installed when Windows NT Server 4.0 is installed:

- Microsoft TCP/IP printing services
- Remote Access Server service
- SNMP service

Note: The SNMP service must be added before the service pack is installed. If you are installing a fresh copy of Windows NT Server 4.0 as shown in this document, SNMP is added during the initial Windows installation, before the service pack installation. If you are using a new platform that has the vendor's operating system preloaded, or if you are not installing a fresh version of Windows NT Server 4.0, you may need to add SNMP before you install the service pack. If the service pack is not reinstalled after adding the SNMP service, you may see the following error:

```
The procedure entry point SnmpSvcGetEnterpriseOID
could not be located in the dynamic link library
snmpapi.dll.
```

The following Windows NT Server 4.0 services should be disabled:

- Internet Information service
- Printing service

Installation of the above services are covered in the section "To configure the server for network use."

Requirements

- Windows NT 4.0 installation media
- relevant device driver disk(s). This depends on the make, manufacturer, and type of cards installed.
- customer details, such as name, company's name, administrative account password

Installation disks

Part of the pre-Windows NT installation procedure is to gather or make disks needed for the remainder of the installation. In addition to the device driver disks mentioned above, you need the following disks:

- 3 - Windows NT installation disks
- 1 - blank disk to be the Windows NT emergency disk

Note: It is possible to start many servers from a CD-ROM, but the system may go into the auto detect hardware mode and not give you the choice of manually installing a specific driver. Nortel Networks recommends that you start the server from Windows NT 4.0 installation disks.

If the server manufacturer has included a quick installation CD-ROM that includes Windows NT but has not included three Windows NT 4.0 installation disks, you can create the disks as follows:

To create Windows NT Server 4.0 installation disks

1. Use the server (running Windows NT) to access the \i386 directory of the Windows NT CD-ROM. To do so, open the Command Prompt and execute the following commands:
   `<drive letter:>` where <drive letter:> is the CD-ROM drive.
   `cd..\i386`
   `winnt32/ox`
2. Click Continue.
3. Insert the first blank formatted disk in drive A, and then click OK.
4. Follow the instructions to create the two remaining disks.
5. Label all three disks.
6. Exit the Command Prompt.

To install the Windows NT Server 4.0 operating system

1. Insert the Windows NT 4.0 Setup Disk 1 in drive A and power up the computer.

   Result: The system boots, loads the disk, and prompts for Setup Disk 2.

2 Insert the Windows NT Setup Disk 2 and press Enter.

Result: Setup loads files from Disk 2. The Windows NT Server Setup screen appears.

3 Press Enter when prompted to begin installation of Windows NT.

Result: The system prompts you to select automatic or manual detection of mass storage devices in the server.

4 Type **S** to skip mass storage device detection so that Setup allows you to specify manual detection.

Result: The system prompts you to select the mass storage controllers.

5 Type **S** to specify additional controllers, which allows you to select from a list of disk controllers.

Result: A list of controllers appears.

ATTENTION

Since the default Windows NT SCSI drivers are not supported, using them might cause system errors.

6 Use the arrow keys to scroll through the list and highlight Other (requires disk provided by the hardware manufacturer). Press Enter.

Result: The system prompts you to insert the manufacturer-supplied hardware support disk into drive A.

7 Remove the Windows NT 4.0 setup disk from drive A, insert the manufacturer-supplied hardware support disk into the floppy disk drive, and press Enter. The RAID or SCSI driver is loaded from the disk.

Note: An IDE hard drive is not recommended.

8 Highlight the mass storage device that you want, and then press Enter.

To format a SCSI backup tape drive

9 If your tape backup drive is a SCSI device, repeat steps 5 to 8.

Note: At this point, use the above steps to install other SCSI device drivers, if required.

To set up a CD-ROM or DVD-ROM driver

10 Type **S** to specify additional controllers, which allows you to select from a list of disk controllers.

11 If you have a CD-ROM drive with a standard IDE controller, use the arrow keys to select IDE CD-ROM (ATAPI 1.2) PCI IDE Controller. Press Enter.

12 When prompted, remove the driver disk from drive A and insert Windows NT Setup Disk 3. Press Enter.

Result: This loads the IDE CD-ROM driver.

13 If you have a type of CD-ROM drive or DVD-ROM drive that is not on the list of disk controllers, use the arrow keys to scroll through the list and highlight Other (requires disk provided by the hardware manufacturer). Press Enter.

Result: The system prompts you to insert the manufacturer-supplied hardware support disk into drive A.

14 Remove the Windows NT 4.0 setup disk from drive A, insert the manufacturer-supplied hardware support disk into the floppy disk drive, and press Enter. The CD-ROM or DVD-ROM driver is loaded from the disk.

15 Highlight the mass storage device that you want, and then press Enter.

Result: This loads the CD-ROM driver or DVD-ROM driver.

To continue installing Windows NT Server 4.0

16 To continue with Windows NT setup, if you do not want to specify additional mass storage devices, press Enter.

Result: The system loads files and prompts you to insert the CD-ROM containing Windows NT Server into the CD-ROM drive.

17 Insert the CD-ROM and press Enter to install Windows NT.

Result: The licensing agreement appears.

18 Use the Page Down key to scroll down to the end of the text. Press F8 to agree with the licensing agreement.

Result: If Windows NT has previously been installed, the system reports the name and location of existing copies of Windows NT.

19 If Windows NT has previously been installed, type N to install a fresh copy or newer version of Windows NT.

Result: The computer description screen appears with a list of installed components.

To format the hard drive

Note: If the setup program detects that one or more of the hard disks in the system has more than 1024 cylinders, a warning message appears. Press Enter to continue.

1 From the list of installed hardware components, verify that the devices match your computer. Highlight The above list matches my computer, and press Enter.

Result: The Windows NT disk partitioning window appears.

2 If a Windows operating system has previously been installed, delete all partitions. Press D to delete a partition, and then press Enter and L to confirm.

3 To format the primary hard drive, highlight the unpartitioned space on the primary hard drive (Disk 0) and type C to create a partition. Enter the size and press Enter. The minimum size is 2048 Mbytes. The recommended size is 4096 Mbytes, but it can be any size as long as it meets the minimum requirement. See “Disk partitioning for new installations” on page 22. Now, highlight the first partition you just created and press Enter.

Result: The system prompts you to select the format type NTFS or FAT.

4 Use the arrow keys to select Format the partition using the NTFS file system, and press Enter.

Result: Setup formats the new partition.

5 To install Windows NT on the formatted drive, press Enter to select the default directory for installing Windows NT, which is \WINNT.

Result: The system prompts you to perform a comprehensive disk check.

6 To perform a comprehensive disk check, press Enter.

Result: The hard drives are examined. If required, the system prompts you to insert the manufacturer-supplied driver disk (for example RAID or SCSI) into drive A to copy the driver(s) to the hard drive. In this case, follow steps 7 and 8.

7 Remove the Windows NT 4.0 setup disk from drive A.

8 Insert the manufacturer-supplied controller driver disk. Press Enter.

Result: Setup copies files to the hard drive. The system prompts you to restart the computer.

9 Remove the disk from drive A and the CD-ROM from the CD-ROM drive. Press Enter to restart the computer.

Result: The system often restarts more than once before launching the Windows NT graphical interface. The system prompts you to insert the CD-ROM.

10 Insert the CD-ROM containing Windows NT 4.0 in the CD-ROM drive.

Note: The system might prompt you to click OK for the system to locate files on the CD-ROM.

Click OK.

Result: Files are copied to the system. The next three parts of setup appear on the window.

11 Click Next to continue.

Result: The system prompts you to enter the name and company name.

Note: The customer should supply the name and company name to be entered.

12 Enter the data requested (name and company name), and click Next.

Result: The system prompts you to enter the CD Key.

13 Enter the Windows NT Server OS Product ID from the sticker as required, and then click Next. Obtain the Product ID from the distributor or vendor, the Windows NT Server 4.0 CD-ROM, or the Symposium Call Center Server Release 4.0 Operating System CD-ROM, as applicable.

Result: The system prompts you to select the Windows NT 4.0 licensing mode.

14 Under the licensing mode window, select Per server and specify 5 as the number of concurrent connections. Click Next.

Result: The system prompts you to enter the computer name.

15 Enter the computer name. For naming rules, see “Required setup data” on page 9.

Note: Obtain this information from the customer or the network administrator.

Click Next.

Result: The system prompts you to select the server’s role or type.

16 Click Stand-Alone Server.

ATTENTION

If any other option is chosen at this step, repeat the procedure from the beginning.

Click Next.

Result: The system prompts you to enter the password for the Administrator account.

17 Enter the Administrator account password and confirm it. The customer should supply the password.

Note: Passwords are case-sensitive. Ensure that the Caps Lock key on the keyboard is not on.

Click Next.

Result: The system prompts you to create an Emergency Repair Disk.

18 Ensure that "No, Do not create an emergency repair disk" is selected. (This is done later. See "Windows NT repair disk" on page 103.) Click Next.

Result: The system prompts you to select the optional Windows components to be installed.

19 To install the default accessories for Windows NT, click Next.

Result: The system prompts you to begin the setup of Windows NT networking.

20 To install Windows NT networking, click Next.

Result: The system prompts you to select how Windows NT participates on the network. Continue with the next procedure, "To configure the server for network use."

To configure the server for network use

1 From the Windows NT Server Setup dialog box, ensure that "This computer will participate on a network" is checked. Ensure that "Wired to the network" and "Remote access to the network" are checked. Click Next.

Result: The system prompts you to install the Internet Information Server.

2 Deselect “Install Microsoft Internet Information server” by clearing the check box. Click Next.

Result: The systems prompts you to install the network card drivers.

To install the ELAN card driver

3 Click Select from List to select the ELAN network card driver from the disk in drive A or from a CD-ROM.

Result: The system prompts you to choose a network adapter from a list.

4 To load the ELAN network card driver from the disk in drive A for example, click Have Disk.

Result: The system prompts you to insert the network card driver disk for the ELAN card in drive A.

5 Insert the ELAN network card driver disk in drive A and click OK. If the path is not A, you must specify the path. For example, some drivers reside in A:\winnt\.

Result: The system prompts you to select the appropriate network card driver from a list.

6 Click the network card driver that appropriately describes the installed network adapter. Click OK.

Result: The Network Adapter setup window appears. The driver you loaded from the disk should be listed and checked.

Note: The ELAN driver is installed. Continue with installing a CLAN driver if it has been installed.

To install the CLAN card driver

7 Set up the CLAN network card as outlined in the substeps below:

a. To select the CLAN network card driver from the disk in drive A or from a CD-ROM, click Select from List.

Result: The system prompts you to choose a network adapter from a list.

b. To load the CLAN network card driver from the disk in drive A for example, click Have Disk.

Result: The system prompts you to insert the network card driver disk for the CLAN card in drive A.

c. Insert the CLAN network card driver disk in drive A and click OK. If the path is not A, specify the path.

Result: The system prompts you to select the appropriate network card driver from a list.

d. Click the network card driver that appropriately describes the installed network adapter, and then click OK.

Result: The Network Adapter setup window appears. The driver you loaded from the disk should be listed and checked.

Note: Ensure that both the ELAN card and the CLAN card are listed and checked.

To install protocols and network services

8 Click Next to continue.

Result: The system prompts you to select the network protocols to install.

9 Ensure that the check boxes are in the following state:

a. TCP/IP Protocol: Checked

b. NetBEUI Protocol: Unchecked

c. NWLink IPX/SPX Compatible Transport: Unchecked

10 Click Next to continue.

Result: The system prompts you to select the network services to be installed.

11 From the Network Services window, click Select from List.

Result: A list of network services appears.

12 Use the arrow keys to scroll to SNMP Service in the Select Network Service dialog box. Select SNMP Service, and then click OK.

Result: The Network Services window appears.

13 To add additional network services, click Select from List.

Result: A list of network services appears.

14 Scroll to Microsoft TCP/IP Printing and click OK.

Result: The Network Services window appears.

At this point, the following services to be installed should be displayed with their boxes checked:

- Microsoft TCP/IP Printing
- SNMP Service
- Remote Access Service
- RPC Configuration
- NetBIOS Interface
- Workstation
- Server

15 Click Next to continue.

Result: The system prompts you to confirm the installation of network components.

16 To install the selected networking components, click Next.

Result: The files are copied to the system.

Note: At this point, the system might prompt you to test the card. Follow the on-screen instructions to perform the test. The setup message `A network card of this type is already installed in the system, do you want to continue?` might appear. Click OK. The message appears when both the ELAN and CLAN cards are of the same make/model/manufacturer. Click Test to complete each test. Click OK to continue with the installation process.

17 The option “Use DHCP to configure the Network” appears. Click No.

Result: The Remote Access Setup window displays the following message: `There are no RAS capable devices to Add. Do you want RAS setup to invoke the Modem Installer to enable you to add a modem?`

To install the modem driver

18 To invoke the Modem Installer, click Yes.

Result: The Install New Modem window appears.

19 Check the box “Don’t detect my modem, I will select it from a list.” Click Next.

Result: Manufacturers and models appear in the Install New Modem window.

20 Select the appropriate manufacturer, and then select the model.

Note: If the manufacturer and model are not listed, select Standard Modem types as the Manufacturer, and Standard 28800 bps Modem as the Model.

ATTENTION

If your modem is not listed and you have the manufacturer's installation disk, then click "Have disk" and follow the instructions on the window.

21 Click Next on the Install New Modem window showing manufacturers and models.

Result: The port selection window appears.

22 Ensure that Selected ports is checked, and then click COM1.

23 Click Next.

Result: The Location Information window appears.

24 Select the appropriate country, area code, and dialing information, and then click Next.

Result: The message `Your modem has been set up successfully` appears.

Note: You can change the information entered for the modem later by double-clicking the Modems icon in Control Panel, selecting this modem, and then clicking Properties.

25 To complete the installation, click Finish.

Result: The Add RAS device window appears.

To continue the Windows NT 4.0 installation

26 Click OK.

Result: The window closes and the RAS window appears.

27 Click Configure.

Result: The Configure Port usage window appears.

28 Ensure that Dial Out is not selected. Ensure that Receive Calls is selected. Click OK.

29 At the RAS window, click Network.

Result: The Network Configuration window appears.

30 For Server Settings, check TCP/IP.

31 At the Network Configuration window, click Configure beside TCP/IP in Server Settings.

Result: The RAS TCP/IP Configuration window appears.

32 Under “Allow remote TCP/IP clients to access,” select “This computer only.”

33 Select “Use static address pool.” Enter Begin and End addresses. To exclude address ranges, type the From: and To: addresses, and then click Add to place the addresses in the Excluded ranges list.

Note: The customer must provide these addresses.

34 To complete the configuration, click OK.

Result: The Network Configuration window appears.

35 To close the Network Configuration window, click OK.

Result: The RAS window appears.

36 Click Continue.

Result: The Microsoft SNMP Properties dialog box appears. The system prompts you to configure the SNMP service.

37 On the Agent tab, enter the optional Contact and Location information. This information should be supplied by the customer. To accept the remaining default SNMP configuration, click OK.

Note: SNMP is installed only for performance monitor counters.

Result: Files are copied to the system. The Microsoft TCP/IP Properties dialog box appears. The system prompts you to enter the TCP/IP parameters.

38 On the IP Address tab, select the ELAN NIC in the Adapter box. Enter the values for IP Address, Subnet Mask, and Default Gateway.

39 On the IP Address tab, select the CLAN NIC in the Adapter box. Enter the values for IP Address, Subnet Mask, and Default Gateway. On the WINS Address tab, ensure the CLAN NIC is in the Adapter box. If required, enter the value for the Primary WINS Server that the customer’s network administrator provides.

Note: You can change the IP address information for the ELAN and CLAN later. See “Setting communications protocols” on page 93.

40 Click OK.

Result: The Windows NT Server Setup window showing bindings appears.

41 Ensure that All Services is selected.

42 Configure the binding order so that the CLAN comes first, then the ELAN card, and then the Virtual Adapters for RAS as follows:

a. Click the plus (+) sign located next to each service to display the protocols beneath that service.

b. Click the plus (+) sign located next to the protocols to display the adapters.

c. Click Move Up and Move Down to arrange the binding order. Click Next.

43 To start the network, click Next.

ATTENTION

The computer must not belong to a Windows NT domain.

Note: Your network administrator must supply the name of the workgroup.

44 To add the computer to the workgroup, click Next.

Result: Windows NT prepares to complete setup.

45 Click Finish to proceed.

Result: The system prompts you for date/time configuration settings.

46 Enter the correct date, time, and time zone. Ensure that “Automatically adjust clock for daylight saving changes” is checked as applicable.

47 Click Close.

Result: Windows NT Setup detects the installed display adapter.

48 To accept the display adapter that Windows NT has detected, click OK.

Result: The Display Properties dialog box appears. The system prompts you to configure the display adapter.

49 Ensure that the following values have been selected:

- Color Palette: 16 Colors (if you can select more, select 256 colors)
- Desktop Area: 800x600
- Font Size: Small Fonts

- Refresh Frequency: 60 Hertz (or default)

Note: You must test these settings before you can proceed in the Windows NT setup.

50 To start the test, click Test.

Result: The system prompts you to continue with the test.

51 To proceed with the display settings test, click OK.

Result: A test screen appears. After five seconds, the system prompts you to select whether you saw the bitmap properly.

52 Click Yes.

Result: The system prompts you to save the display settings.

53 To save the tested display settings, click OK.

Result: The Display Properties dialog box appears.

54 To finalize the display settings and continue with Windows NT Setup, click OK.

Result: Files are copied to the system. Windows NT Setup sets security on system files, and saves the system configuration.

55 Remove the CD-ROM from the CD-ROM drive, and the disk from drive A.

56 To complete Setup, click Restart Computer.

Result: The Windows NT Server operating system has been installed. The Windows NT logon box appears.

Installing the Windows NT Server service pack

When to install

Perform this procedure immediately after installing Windows NT 4.0. If you want to install additional drivers (for instance, the CLAN card driver) after installing Windows NT 4.0, you must first install the service pack.

You can install the latest recommended service pack from the included Platform Support CD-ROM, or you can download Windows NT service packs from the following web site:

http://www.microsoft.com/ntserver/

Note: Not all servers support all NT service packs greater than Service pack 3. Check with the manufacturer of the server you are installing to determine which service packs are compatible. The service pack must also be approved for use by Nortel Networks. Initially, Service Pack 6a is approved and included with the Symposium Call Center Server package.

Requirements

- latest approved Windows NT 4.0 service packs
- server with Windows NT Server 4.0 installed

If you are installing Service Pack 6a from a CD-ROM, see the following instructions. If you are downloading a service pack, follow the instructions on the web site for installing the service pack.

To install Windows NT 4.0 Service Pack 6a from the Symposium Call Center Server Release 4.0 Platform Support CD-ROM

1. Log on to the system as Administrator. See “To log on to the server as Administrator” on page 89.
2. Insert the Platform Support CD-ROM into the CD-ROM drive.
3. Click Start > Programs > Windows NT Explorer.

   Result: The Windows NT Explorer window appears.

4. To see all file extensions, click View > Options, click Show all files, and then uncheck Hide file extensions for known file types. Click Apply, and then click OK.
5. Navigate to E:\Service Pack 6a\US-40bit\ (where E is the CD-ROM drive).
6. Double-click Sp6ai386.exe to run the program.

   Result: The system extracts and verifies Service Pack 6a files. A welcome window appears.
7. Check the box to accept the license agreement, and uncheck the box stating `Backup files necessary to uninstall the Service Pack at a later time...`
8. Click Install.

   Result: The program examines the system, selects the files to copy, and then copies them. If messages appear, refer to the next two steps for the action to take in response to the messages.
9. As the files are installed, if the message `The target file exists and is newer than the source. Overwrite the newer file?` appears, click No to retain the newer file.
10. As the files are installed, if the message `This file has been identified as an OEM-installed file. Would you like to overwrite the version of the file on your system with the Service Pack version?` appears, click No to retain the OEM file.
11. When a message appears informing you that Windows NT 4.0 Service Pack 6 installation is complete, remove the CD-ROM and click Restart to restart the server.

    Result: Service Pack 6a is installed.

Uninstalling Microsoft Internet Information Server

When to uninstall

If you have followed the steps in this chapter to install a fresh version of Windows NT Server 4.0, you did not install Microsoft Internet Information Server (MIIS), and you can ignore this procedure.

If you are using a new platform that has the vendor's operating system preloaded, or if you did not install a fresh version of Windows NT Server 4.0, the system may have MIIS installed. Use this procedure to remove MIIS.

To uninstall MIIS

1. Click Start > Programs > Microsoft Internet Server (Common), and then choose Internet Information Server Setup.

   Result: The welcome window for Microsoft Internet Information Server 3.0 Setup appears.

2. Click OK.

   Result: The welcome window for Microsoft Internet Information 3.0 installation maintenance program appears.

3. Click Remove All to remove previously installed components.

4. When the confirmation message appears, click Yes to continue.

5. If the message `Microsoft FTP Publishing Service is running. Do you want to stop the service?` appears, click Yes.

   Result: A message appears to inform you that Microsoft Internet Information Server 3.0 setup was updated successfully.

6. Click OK.

   Result: MIIS is successfully removed.

Formatting the remaining hard drives

Introduction

Perform this procedure to format additional hard drives installed on your server. You require a server with Windows NT Server 4.0 installed on drive C. The server should be powered up and operating at the Windows NT logon prompt.

Notes:

- If you are rebuilding a Nortel Networks 702t server, see “Disk partitioning for 702t server installations” on page 24 in addition to the following instructions.
- If you are rebuilding a Nortel Networks 1003t server, see “Disk partitioning for 1003t server installations” on page 25 in addition to the following instructions.

To partition drives using Disk Administrator

When partitioning drives, you should be aware that drive C is already a primary partition. If you follow the procedures in this section, all other drives will be created using extended partitions.

1. Press Ctrl+Alt+Delete to display the Windows NT logon box.
2. Log on to the system as Administrator.
3. Click Start > Programs > Administrative Tools (Common) > Disk Administrator.

   Result: The Disk Administrator notifies you that this is the first time this program has been run.
4. To acknowledge the message, click OK.
5. Click Yes to each of the following requests to write a signature to each hard drive.

   Result: When a signature has been written to all the disks, the Disk Administrator window appears.

   Note: Each SCSI disk (or RAID System Pack) is listed on the window. Each disk has a number (Disk 0, Disk 1, and so on). Disk 0 already has an

NTFS partition for drive C. (The minimum size is 2048 Mbytes. The recommended size is 4096 Mbytes, but it can be any size as long as it meets the minimum requirement. See “Disk partitioning for new installations” on page 22.) The remaining space on Disk 0 and on each remaining disk should be listed as Free Space.

In general, on each disk (including Disk 0), you select the Free Space, click Partition > Create Extended, and enter the size of the extended partition. Next, you select the Free Space within the extended partition just created, click Partition > Create, and enter the size of the logical drive you want to create. The system indicates a new logical drive. If there is enough Free Space left in the extended partition area, you can create additional logical drives on the same disk.

The drive letter assignment is automatic and sequential, but you can change drive letters after you commit the changes to disk later in this procedure.

To create logical drive D

Drive D can be on Disk 0, or it can be on a separate disk. This example shows how to create a logical drive D on the remaining space of Disk 0. You can use the same procedure to create a logical drive D on a separate disk.

6 Select the free space on Disk 0 by pointing and clicking.

Result: The Disk Administrator highlights the Free Space with a thick, black border.

7 Select Partition > Create Extended.

Note: If you do not create an extended partition, you may encounter problems during conversion or startup. See “Disk partitioning issues” on page 114.

Result: The system prompts you for the size of the extended partition. The maximum size of the extended partition is the entire Free Space.

8 Accept the maximum size of the extended partition, and click OK.

Result: The extended partition is created.

Note: If you create an extended partition on a 4 Gbyte hard drive, there are less than 4096 Mbytes of drive space left due to the header size used for the extended partition. In this case, the PVI Compliance Check utility that you run later in the installation process may indicate a non-compliant condition as it looks for a minimum drive space of 4096 Mbytes. If there are

4080 Mbytes or more of space available, you can safely ignore this warning. See “PVI Minimal Configuration Compliance Check utility” on page 110. You may encounter the same problem if you partition a larger hard drive (for example, if you split a 9 Gbyte hard drive using two 4 Gbyte partitions).

9 Click and select the Free Space within the extended partition you just created.

Result: The Disk Administrator highlights the free space with a thick, black border.

10 Select Partition > Create.

Result: The system prompts you for the size of the logical drive. The maximum size is the entire Free Space. (Leave 10 percent of the entire disk space for maintenance purposes.)

11 Enter the size of the logical drive, and then click OK.

Note: The minimum size of drive D is 2048 Mbytes. The recommended size is 4096 Mbytes, but it can be any size as long as it meets the minimum requirement.

Result: The logical drive is created. The drive letter may not be D at this time if, for instance, the CD-ROM drive is already assigned the letter D. You can change drive letters after you commit the changes to disk later in this procedure.

To create logical drives F through Z

Drive F should be on a separate physical disk from drive C.

12 Select the Free Space on one of the remaining disks (for example, Disk 1) by pointing and clicking.

Result: The Disk Administrator highlights the free space with a thick, black border.

13 Select Partition > Create Extended.

Result: The system prompts you for the size of the extended partition. The maximum size is the whole disk.

14 Accept the maximum size of the extended partition, and then click OK.

Result: The extended partition is created.

15 Click and select the Free Space on the same disk again.

Result: The Disk Administrator highlights the free space with a thick, black border.

16 Select Partition > Create.

Result: The system prompts you for the size of the logical drive. The maximum size is the entire Free Space. (Leave 10 percent of the entire disk space for maintenance purposes.)

17 Enter the size of the logical drive, and then click OK.

Note: The minimum size of drive F is 4096 Mbytes, but it can be any size as long as it meets the minimum requirement. It must be on a separate physical disk from drive C.

Note: The minimum size of drives G–Z is 4096 Mbytes each, but can be any size (in 1 Gbyte increments) as long as they meet the minimum requirement. See “Disk partitioning for new installations” on page 22. Drives G–Z can be on separate physical disks or on the same disk as drive F, depending on the customer’s preference and hardware configuration.

Result: The logical drive is created.

18 To create additional logical drives on the same disk, repeat steps 15 to 17. When you are finished creating logical drives on a disk, ensure that approximately 10 percent of the total disk is Free Space for diagnostic purposes.

19 For each disk, repeat steps 12 to 18.

20 From the Partition menu, choose Commit Changes Now.

Result: The system prompts you to confirm your changes.

21 To commit the changes to disk, click Yes.

Result: The Disk Administrator informs you that the disks were successfully updated.

22 Click OK.

Result: The system confirms the update.

To reassign drive letters

23 At this point, you can reassign drive letters to the partitions to keep them in sequence as follows:

a. Right-click a partition.

b. Click Assign Drive Letter.

c. Select a drive letter from the drop-down list.

d. Click OK.

For drive letter assignments, see “Disk partitioning for new installations” on page 22.

Tip: To swap letters between two drives, assign a temporary unused letter to one drive, and then change both drives to their final letter assignments.

To format the logical drives

24 Select the first newly created logical drive (for example, Disk 0 drive D), and then click Tools > Format.

Result: The system prompts you to enter the formatting information.

25 Select NTFS for the File System, and check the box labeled Quick Format. Click Start.

Result: The system prompts you to confirm the format.

26 To proceed with the format, click OK.

Result: Windows NT formats the drive.

27 When the format is complete, click OK to view the Format Summary Information window, and then click Close.

Result: The Disk Administrator program window appears.

28 Repeat steps 24 to 27 to format the next drive. You must format each time for drive D, F, G, H, I, and so on. (Drive E is the CD-ROM drive.)

Note: The F partition is for the database and must be a minimum of 4 Gbytes (4096 Mbytes).

29 Exit Disk Administrator.

Installing the tape device driver

Introduction

The customer must provide the driver for the tape drive. You can perform this procedure after installing Windows NT Server.

To install the tape device driver

1. Power up the server or press Ctrl+Alt+Delete.

   Result: The Windows NT logon box appears.

2. Log on as the Administrator.

   Result: You are logged on to Windows NT, and the Start Menu appears.

3. Click Start > Settings > Control Panel.

   Result: The Control Panel appears.

4. Double-click the Tape Devices icon.

   Result: The Tape Devices control panel appears. Windows NT attempts to detect the installed tape drive. The list of available tape drive device drivers appears.

5. Select the appropriate device driver for the installed tape drive and click OK. Some tape drives might require a driver disk.

   Result: The system prompts you to install the selected driver.

   Note: If the tape device driver is listed, skip to step 8. If the tape driver is not listed and you have the manufacturer's supplied driver disk ready, insert the driver disk and click Have Disk.

   Result: The system prompts you to insert the manufacturer's installation disk.

6. Insert the manufacturer's supplied installation disk in drive A, enter the path to the device driver, and click OK.

   Result: The system prompts you to select a device driver from the displayed list.

7 Select the most appropriate driver and click OK.

Result: The system prompts you to install the selected driver.

8 To install the selected driver, click OK.

Result: The system prompts you to insert the Windows NT CD-ROM.

9 Insert the CD-ROM containing Windows NT into the CD-ROM drive and click OK.

Result: The driver files are copied to the system. The Tape Devices Control Panel appears.

10 To close the control panel and save the changes, click OK.

Result: The Windows NT Control Panel appears. The tape device driver is installed.

Configuring the virtual memory

Introduction

Perform this procedure after you have installed the Windows NT 4.0 service pack. The virtual memory should be the size of RAM plus at least 12 Mbytes. As minimal RAM size is 256 Mbytes, the virtual memory size can be as small as 268 Mbytes.

By default, when Win NT 4.0 is installed on drive C, the operating system creates the swap file on that same drive.

To check the RAM size

1. From the Windows Start menu, choose Settings > Control Panel, and then double-click the System icon.

   Result: The System Properties property sheet appears, with the General tab displayed.

2. Record the RAM size from the General tab on a sheet of paper.

To configure the virtual memory

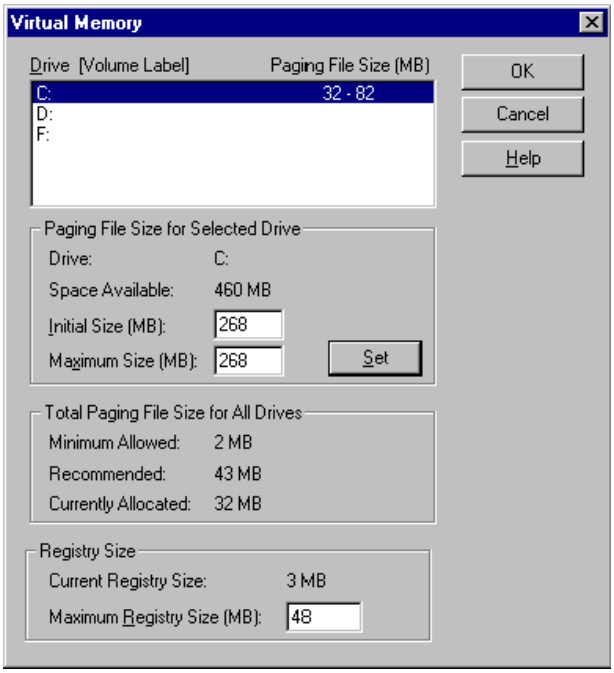
1. From the Windows Start menu, choose Settings > Control Panel, and then double-click the System icon.

   Result: The System Properties property sheet appears, with the General tab displayed.

2. Click the Performance tab.

3. Under Virtual Memory, click Change.

Result: The Virtual Memory window appears.



4 Select drive C.

5 Under Paging File Size for Selected Drive, if the Initial and Maximum virtual memory size are different from RAM plus at least 12 Mbytes, enter the size of RAM plus 12 Mbytes for Initial Size (MB) and for Maximum Size (MB).

6 Click Set.

7 Click OK, and then click Close.

Result: The system prompts you to restart the server.

8 To restart the server, click Yes.

Configuring the modem for remote access service

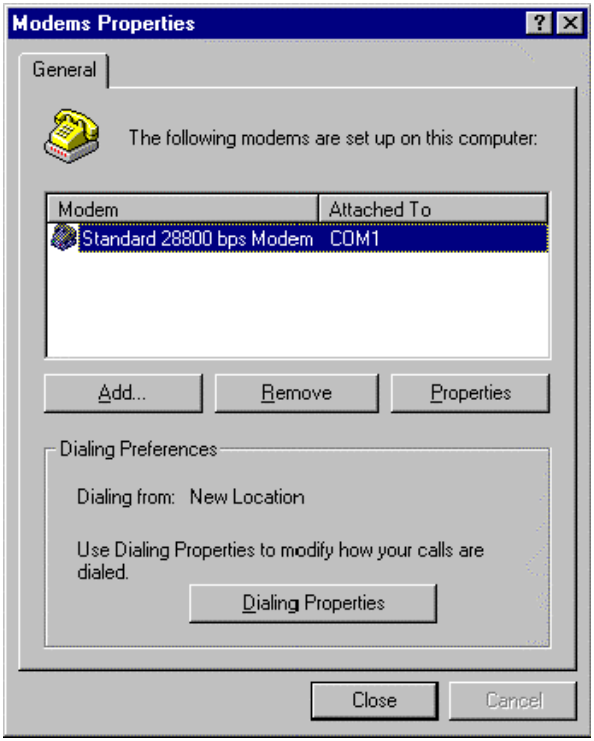
Introduction

Perform these procedures after installing Windows NT Server. If the modem was improperly or incompletely installed during Windows NT Server installation, perform the following procedures to check and reconfigure the modem.

To configure the remote access service modem

1. Power up the system and log on as Administrator.
2. From the Windows Start menu, choose Settings > Control Panel, and then double-click the Modems icon.

Result: The Modem Properties property sheet appears.



3 If a modem is listed and it does not match the modem installed, select the incorrectly installed modem and click Remove.

Note: If a modem is listed and matches the modem installed, go to the next procedure. Also, if the modem listed is correct, review the next procedure, “To reconfigure the remote access service modem” on page 73 to ensure that your RAS settings are correct.

Result: A message appears asking you to confirm that you want to remove the incorrectly installed modem.

4 Click Yes.

5 To add the correct modem, click Add.

Result: The Install New Modem panel appears.

6 Click Don't detect my modem; I will select it from a list, and then click Next.

Result: The Install New Modem dialog box appears.

7 Select the type of modem installed on the server, and then click Next.

Note: If your modem is not listed, select the Standard 28800 bps Modem.

Result: The Install New Modem dialog box appears.

8 On Selected Ports, click COM1. Click Next.

9 To complete installing the modem, click Finish.

Result: The Modem Properties property sheet should appear as follows:

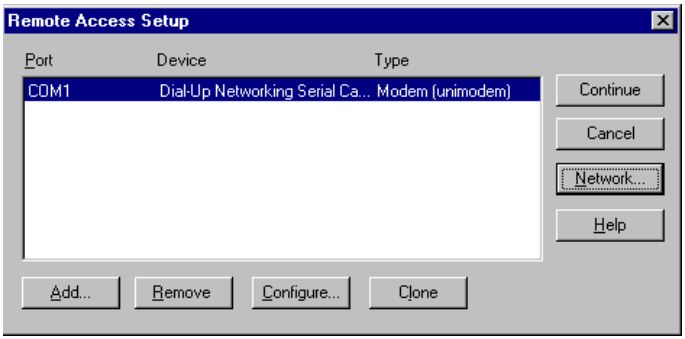
To reconfigure the remote access service modem

ATTENTION

This procedure must be performed only if the modem listed matches the actual modem installed. Perform steps 1 and 2 of the previous procedure to see the modem listed, and then continue with the steps below.

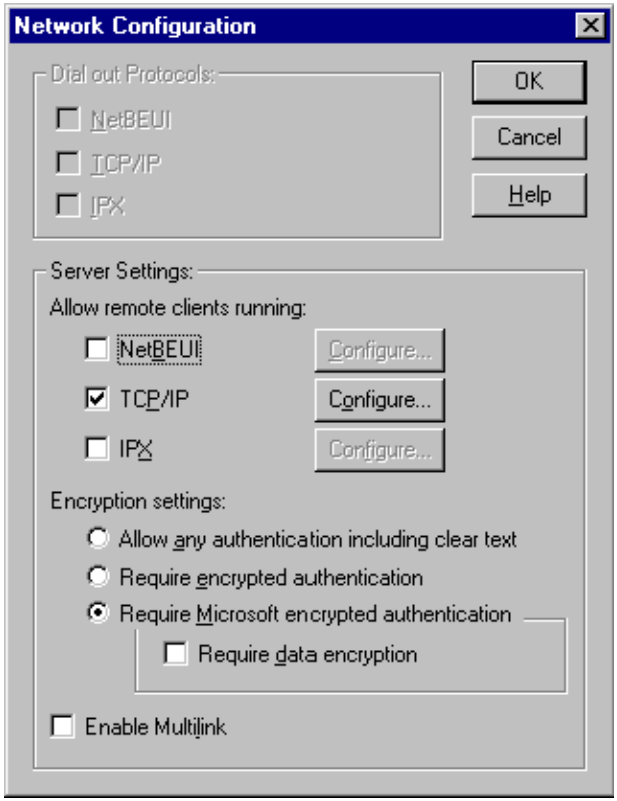
1. From the Windows Start menu, choose Start > Settings > Control Panel, and then double-click the Network icon to open the network control panel.
2. Click the Services tab.
3. Select Remote Access Service, and then click Properties.

   Result: The Remote Access Setup window appears.



4 Click Network.

Result: The Network Configuration window appears.



5 Under Server Settings, ensure the following:

- NetBEUI is unchecked
- TCP/IP is checked
- IPX is unchecked

6 Click Configure next to TCP/IP.

Result: The RAS server TCP/IP Configuration panel appears.

7 Ensure that This computer only is selected.

8 Fill in the Begin and End addresses as supplied by your network administrator.

9 To enter any excluded ranges for this customer's site, type the From: and To: addresses, and then click Add to place the addresses in the Excluded ranges list.

10 Click OK.

Result: The Network Configuration panel appears.

11 Click OK.

Result: The Remote Access Setup panel appears.

12 Click Continue.

Result: The Network Control panel appears.

13 Click Close.

Result: The system prompts you to restart your computer.

14 Click Yes to restart.

Preparing the server for remote access with pcAnywhere

Introduction

After you have completed RAS configuration, you must install pcAnywhere 9.2 software on the server. With pcAnywhere, you can perform advanced administrative tasks on the server from a remote PC and control the server as though you were directly connected to it. You install pcAnywhere on the C partition.

Note: You must ensure that the correct video driver is installed on the server before you install pcAnywhere. Failure to do so can cause blue screens to appear after the installation of pcAnywhere or while transferring files. For additional information, see “Troubleshooting pcAnywhere problems” on page 112.

Remote Access Service

Remote Access Service (RAS) enables you to connect the server and the administration client PC over a PSTN using a modem. RAS is installed during the Windows NT installation and configuration.

To install pcAnywhere

1. Log on to the server as Administrator.
2. Insert the Symposium Call Center Server Release 4.0 Platform Support CD-ROM containing pcAnywhere 9.2 into the CD-ROM drive.
3. In Windows NT Explorer, browse to E:\Third Party\Symantec\Installs\Pca9.2\CD\Disk1(where E: is your CD-ROM drive).
4. Double-click the setup.exe file.

   Result: The Symantec installation wizard window appears with a welcome message.
5. Click Next.

   Result: The License agreement appears.

6 Select I accept the terms …, and then click Next.

Result: The program requests customer information.

7 Enter the User Name and Organization, and then click Next.

Result: The program requests the Setup Type.

8 Select Typical and click Next.

Result: The Ready to install the program notification appears.

9 Click Install and wait until the Setup wizard completes.

Result: The Support Solutions window appears.

10 Click Next.

Result: The Windows Solutions window appears.

11 Click Next.

Result: The How to reach Symantec Online information appears.

12 Click Next.

Result: Additional options appear.

13 Uncheck all options and click Next.

Result: The Register Symantec pcAnywhere window appears.

14 Click Skip.

15 Click Yes to confirm that you want to skip registration.

Result: The message `The InstallShield wizard has successfully installed pcAnywhere` appears.

16 Click Finish.

Result: A message informs you that you have to restart the system for the changes to take effect.

Note: For multi-processor systems, skip step 17 and continue with step 18.

17 For single-processor systems only, select Yes to restart the server now and remove the CD-ROM from the CD-ROM drive.

Result: The system restarts automatically. If the system fails to start, restart it manually.

This completes the installation process for pcAnywhere 9.2 on single-processor systems.

18 For multi-processor systems only, select No to restart the server later.

Note: Due to some problems related to pcAnywhere functionality on multi-processor systems, you must add a registry value in the Windows NT registry under pcAnywhere software. To add the ProcessorMask value in the registry, proceed as follows:

a. In Windows NT Explorer, navigate to E:\Third Party\Symantec\Installs\MultiProc (where E: is your CD-ROM drive).

b. Double-click the file named AddProcMask.reg.

Result: A message informs you that the information in the file has been successfully entered into the registry.

c. Click OK and remove the CD-ROM from the CD-ROM drive.

d. Restart the computer. If the system hangs up, restart it manually.

This completes the installation process for pcAnywhere 9.2 for multi-processor systems.

To start pcAnywhere for the first time

For Symposium Call Center Server Release 4

1 Log on to Windows NT as Administrator.

2 From the Windows Start menu, choose Programs > Symantec pcAnywhere.

If you are asked if you want to register pcAnywhere, click Skip.

Result: The Smart Setup Wizard window appears. You are prompted for the modem device.

3 Choose the entry that matches your modem, and then click Next.

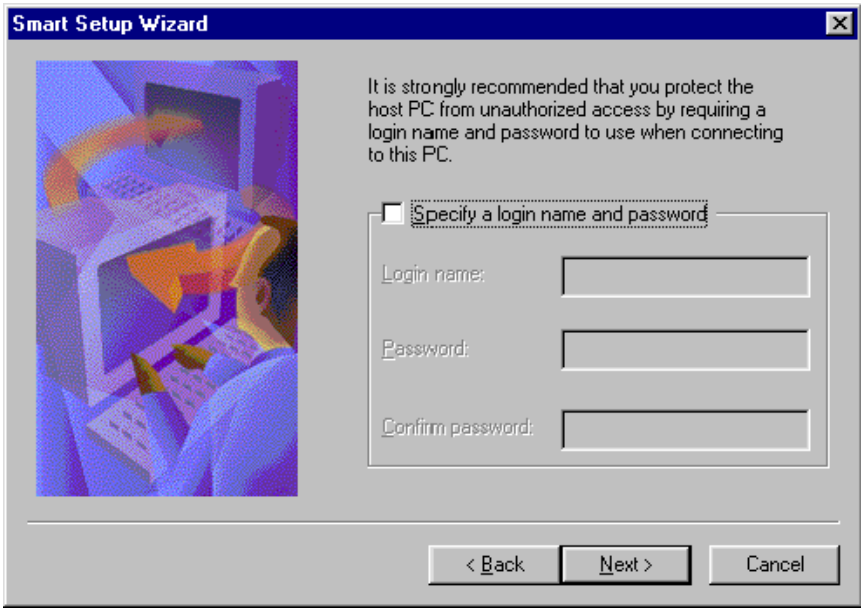
Result: The system prompts you to select the network device.

4 Ensure that only TCP/IP is selected, and then click Next.

Result: The system prompts you to select a port.

5 Ensure COM1 is selected. Click Next.

Result: The setup wizard asks you for a login name and password.



6 Deselect Specify a login name and password as shown above, and then click Next.

Result: A window informs you that you have successfully installed pcAnywhere.

7 Click Finish.

Result: The pcAnywhere main window appears.

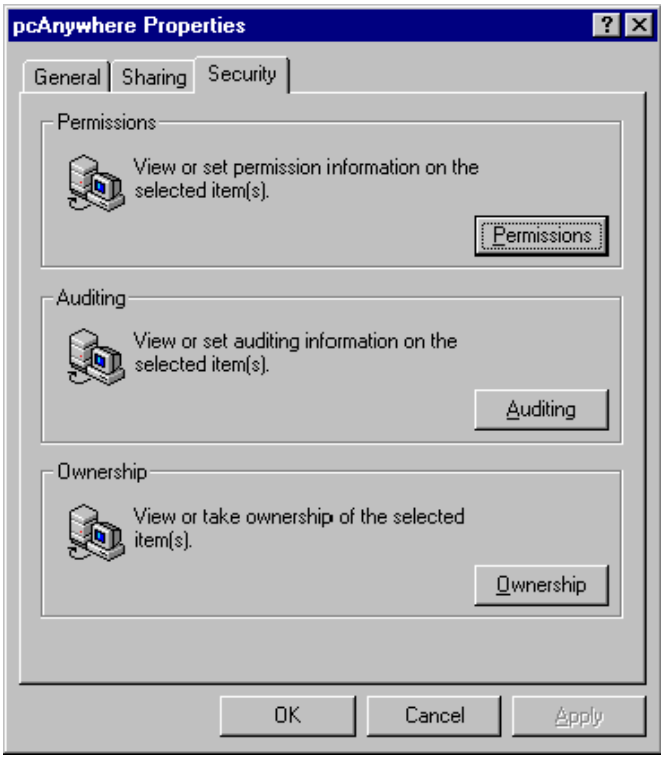
Configuring pcAnywhere

When you configure pcAnywhere, you set up a secure caller account to access the server. You can add a caller account for each remote PC, including Nortel Networks. These caller accounts restrict usage of pcAnywhere to appropriate users.

During pcAnywhere configuration, if you get a message that you do not have the right to modify that setting or create a new caller, proceed as follows:

To change Windows NT Users access rights for pcAnywhere files

1. Close pcAnywhere.
2. Open the Program Files/Symantec folder.
3. Select the pcAnywhere folder.
4. Right-click the folder and, from Properties, click the Security tab.

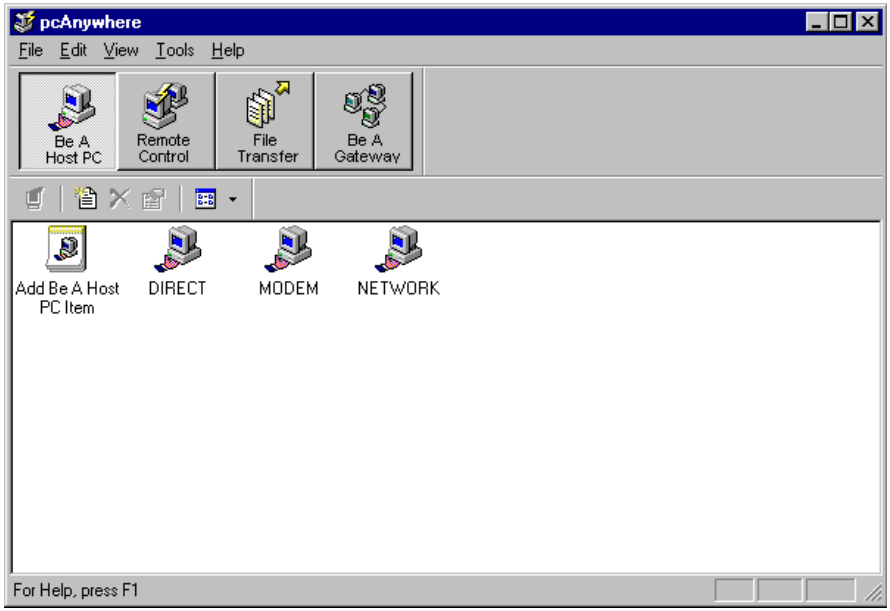


5. Click Permissions and, for Administrators, select Type of Access: Full Control.
6. Click OK to save the changes.
7. Click OK to exit the Properties window.

To set the video mode

1 Click Start > Programs > Symantec pcAnywhere.

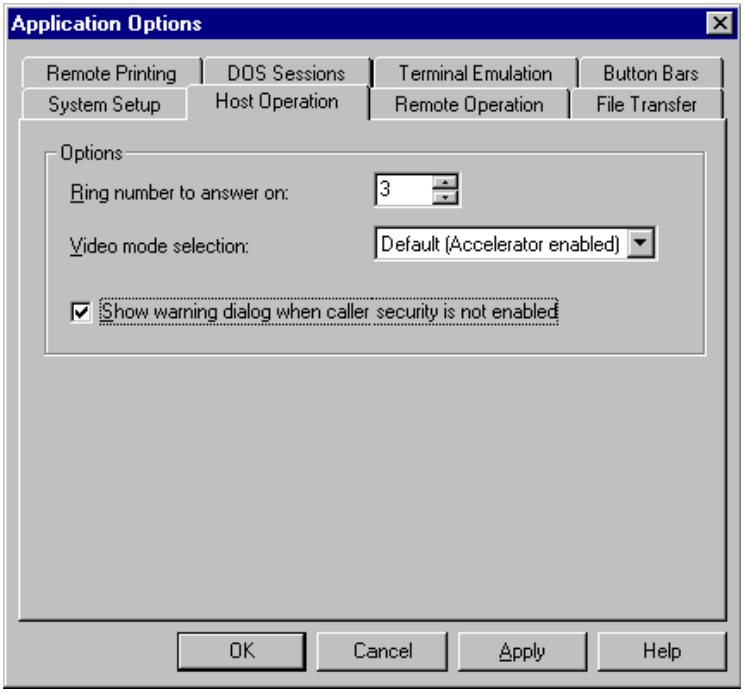
Result: The pcAnywhere main window appears.



2 From the Tools menu, choose Application Options.

Note: You may be prompted for your area code. If so, enter the area code and click Next.

Result: The Application Options property sheet appears.



3 Click the Host Operation tab.

4 Click the Video mode selection drop-down list to select Default (Accelerator enabled).

5 Click Apply.

6 Click OK to exit.

To configure pcAnywhere as a host PC

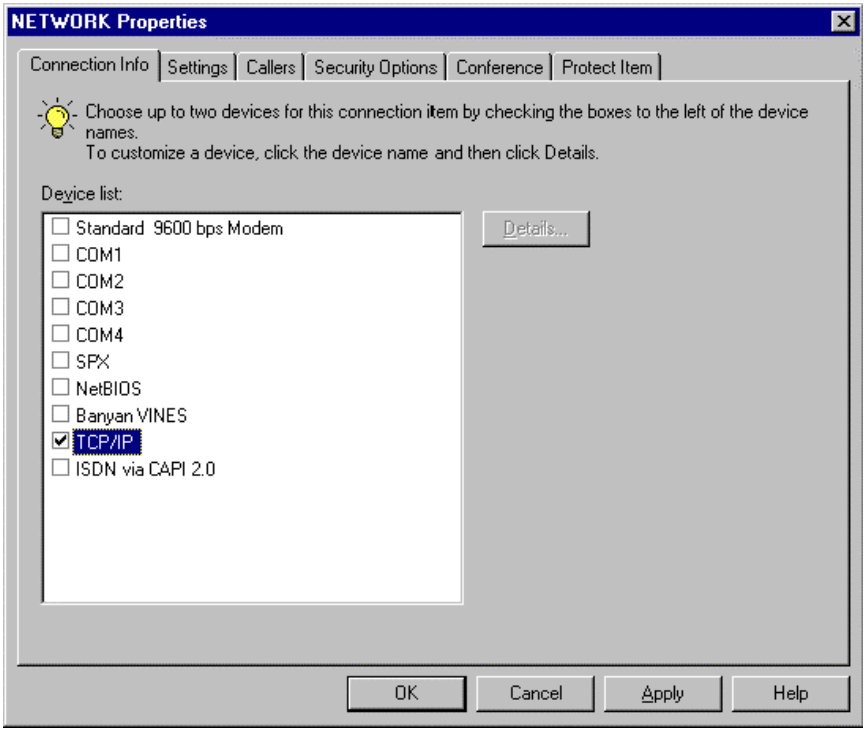
1 In pcAnywhere, ensure Be a Host PC is selected.

2 Right-click the Network icon, and then select Properties.

Result: The NETWORK Properties property sheet appears.

3 Ensure you are viewing the Connection Info tab.

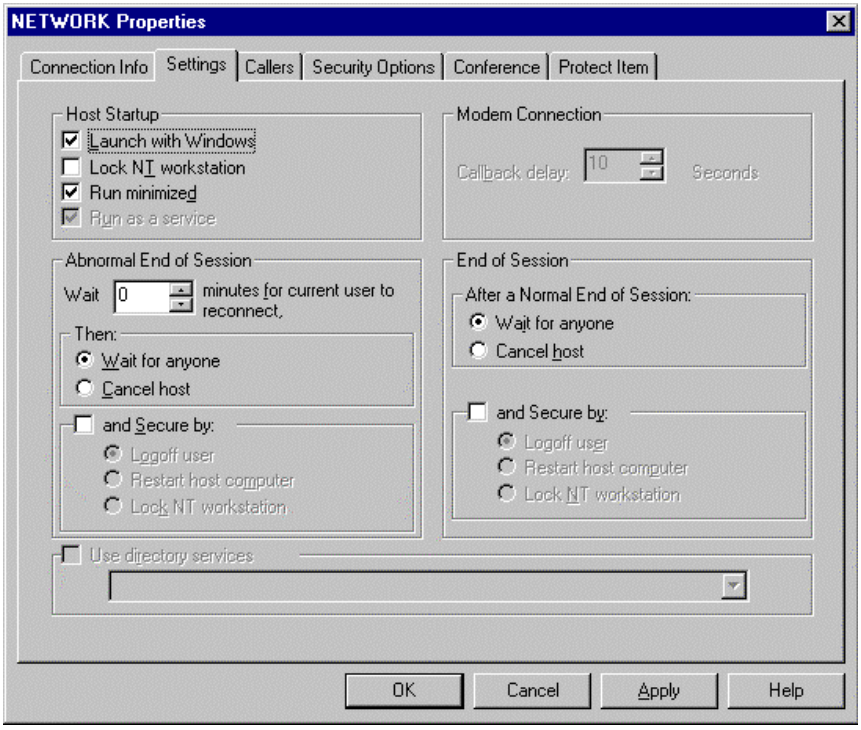
4 If necessary, ensure that only TCP/IP is checked, as in the following example:



5 Click Apply to save the changes.

6 Click the Settings tab.

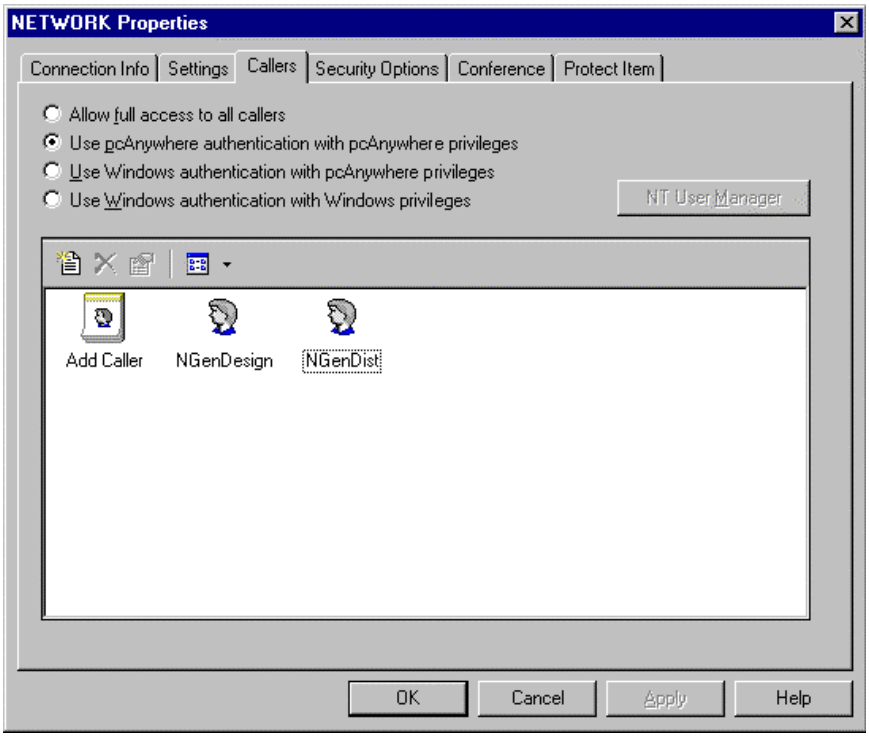
7 Ensure that settings are as shown in the following example:



8 Click Apply to save the changes.

9 Click the Callers tab.

10 Select Use pcAnywhere authentication with pcAnywhere privileges.



Note: If NGenDist and NGenDesign caller icons have already been created, then skip to step 16.

11 Double-click the Add Caller icon to add a new caller.

Result: The New Caller wizard appears.

12 Type **NGenDist** as the name of the caller, and then click Next.

Result: The system prompts you to enter a password.

13 Type **ntdist**, which is the default password for the NGenDist account, and then confirm the password.

Note: This is the password for the distributor to access the server for support.

14 Click Next, and then click Finish to save the changes.

Result: You are returned to the Callers tab.

15 Repeat steps 11 to 14 for the NGenDesign account, using **Nortel** as the default password for the NGenDesign account.

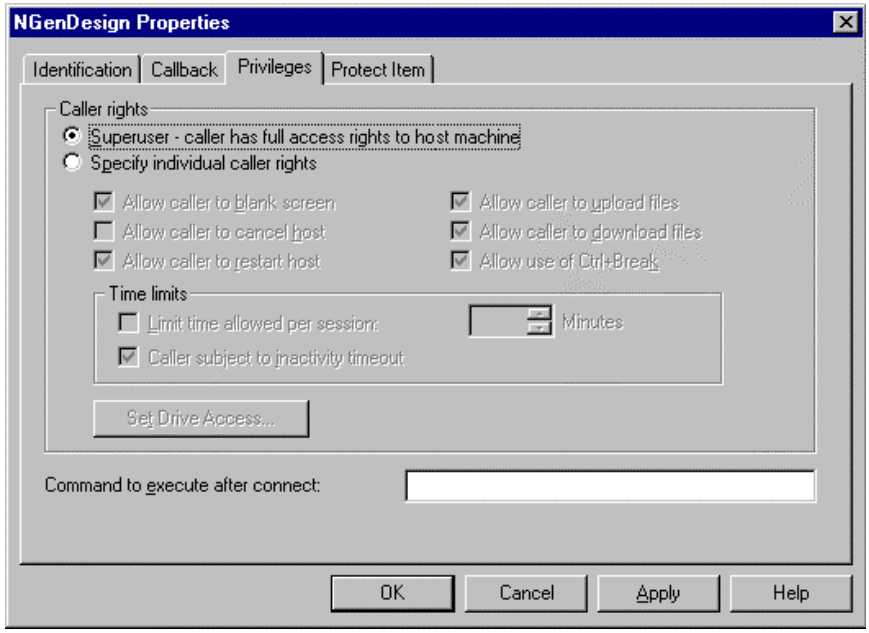
Note: This is the password for a designer to access the server as a superuser.

16 Right-click the NGenDesign caller icon and select Properties.

Result: The NGenDesign Properties window appears.

17 Click the Privileges tab.

18 Select Superuser, as shown in the following example:



19 Click Apply to save the changes.

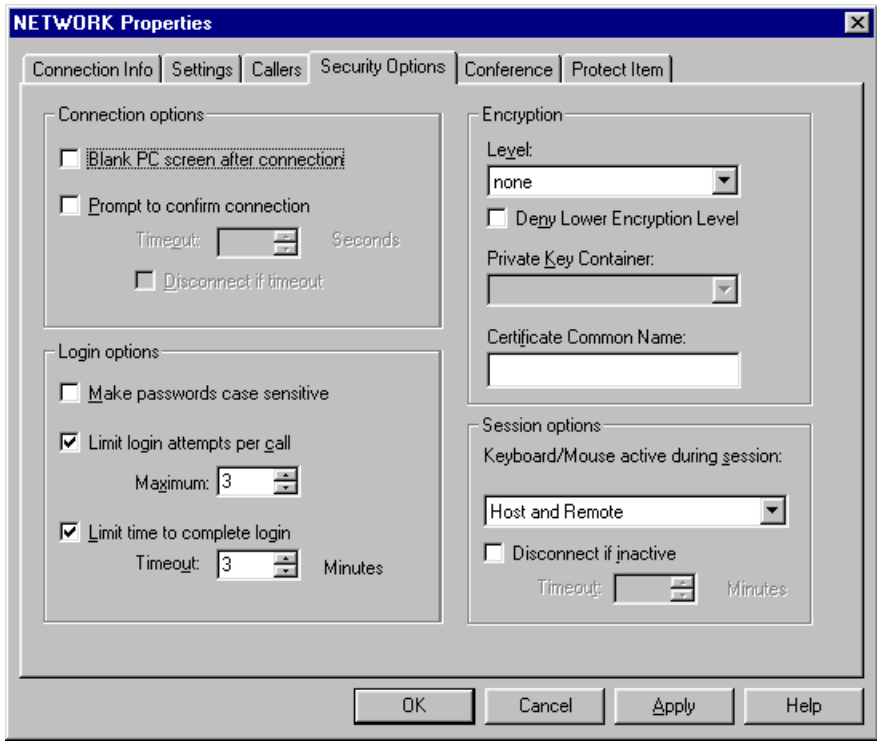
20 Click OK to exit the Properties window.

Result: The NETWORK Properties sheet appears.

Note: Do not set up Superuser privileges for the distributor (NGenDist) account.

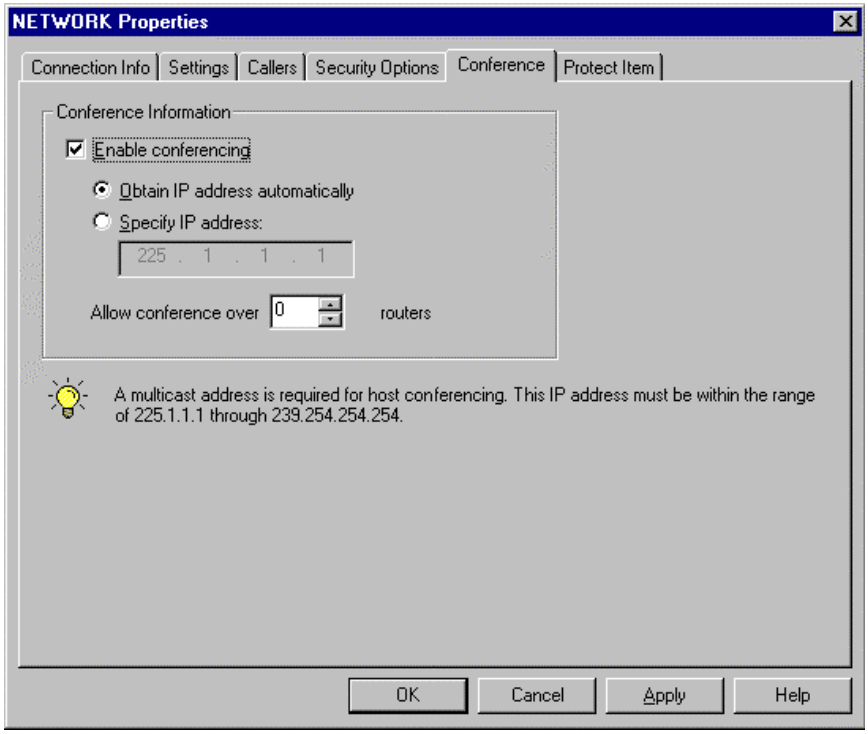
21 Click the Security Options tab.

22 Ensure that settings are as shown in the following example:



23 Click the Conference tab.

24 Ensure that Enable conferencing and Obtain IP address automatically options are selected, as shown in the following example:



25 Click Apply to save the changes.

Note: Do not go to the Protect Item tab and enter or lock a password that controls who can modify the network settings here. Locking instructions are provided for support administrators in the maintenance section of the *Symposium Call Center Server Software Installation and Maintenance Guide*.

26 Click OK to apply all pcAnywhere settings.

To perform additional administration tasks in pcAnywhere, see the *Symposium Call Center Server Software Installation and Maintenance Guide*. Support administrators should use the guide to change the NGenDist and NGenDesign passwords from their default passwords as soon as possible.

Performing standard procedures

To log on to the server as Administrator

1. Start the server with Windows NT.
2. Press Ctrl+Alt+Delete.

   Result: The logon dialog box appears.
3. Type **Administrator** as the User ID.
4. Enter the password and click OK.

To change the Administrator password

1. Log on to the server as Administrator.
2. Press Ctrl+Alt+Delete.
3. Click Change Password.
4. Enter the old password.
5. Enter the new password and confirm it.
6. Click OK.

To change the minimum password length

Windows NT Server 4.0 must allow the four-character temporary password "ngen" to be created when Symposium Call Center Server is installed. Use this procedure to change the minimum password length.

Notes:

- If you have just installed a fresh version of Windows NT Server 4.0, the system is configured to permit blank (or short) passwords. Use this procedure to check the password restrictions.
- If you are using a new platform that has the vendor's operating system preloaded, or if you did not install a fresh version of Windows NT Server 4.0, the system may be configured for a minimum password length that is

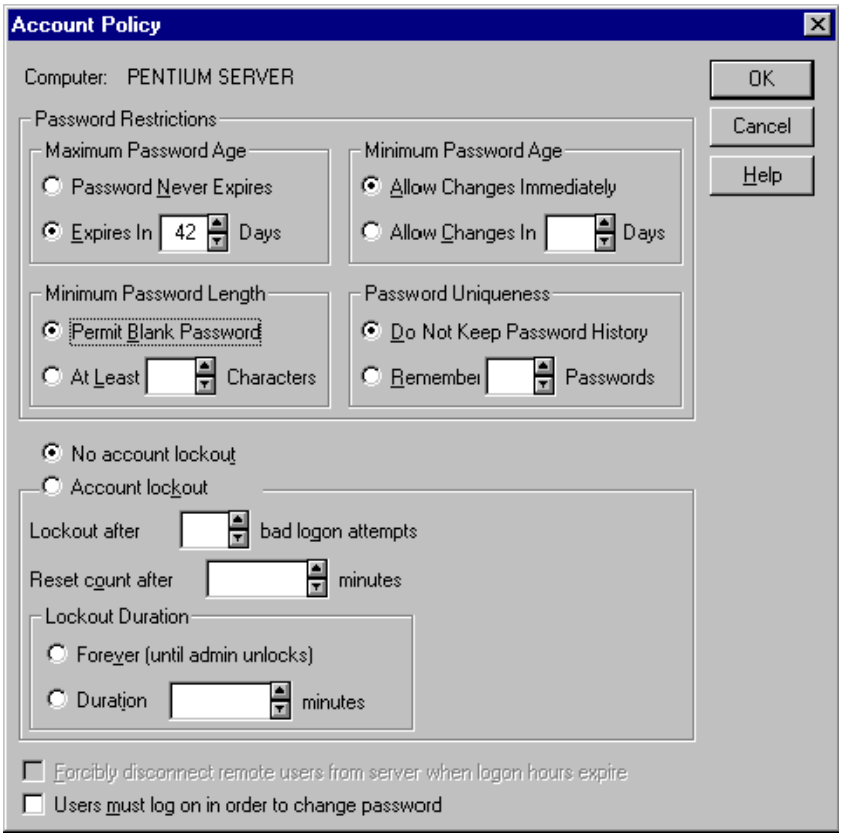
longer than four characters. Use this procedure to change the minimum password length.

1 Click Start > Programs > Administrative Tools (Common) > User Manager for Domains.

Result: The User Manager window appears.

2 On the Policies menu, click Account.

Result: The Account Policy dialog box appears.



3 If the Minimum Password Length has been previously set to any length, click Permit Blank Password.

4 Click OK.

Result: The User Manager window appears.

5 Exit the User Manager window.

To change the computer name

Note: You can change the computer name from a dummy name to a proper name during a new installation.

1 Start the computer with Windows NT, and log on to the server as Administrator.

2 From the Windows Start menu, choose Settings > Control Panel, and then double-click the Network icon.

3 Click Change on the Identification tab.

4 Type the new computer name and click OK.

Note: The computer name is case-sensitive. Type the name exactly as you want to see it. For naming rules, see “Required setup data” on page 9.

5 After a cautionary prompt that warns of possible problems appears, click Yes to continue.

6 To restart the computer, click Yes.

The computer’s DNS name must match the main computer name. Verify that the name of the computer in the TCP/IP configuration is the same as the main computer name as follows:

a. From the Windows Start menu, choose Settings > Control Panel, and then double-click the Network icon.

You can view the Computer Name.

b. Click the Protocols tab, and then select TCP/IP protocols from the list of installed network software. Click Properties > DNS tab.

You can view the Host Name.

To change the workgroup name

1 Start the computer with Windows NT, and log on to the server as Administrator.

2 From the Windows Start menu, choose Settings > Control Panel, and then double-click the Network icon.

3 Click Change on the Identification tab.

4 Enter the new workgroup name and click OK.

Note: The computer must not belong to a Windows NT domain. Application software cannot run if the computer is part of a Windows NT domain.

5 Click Yes to the cautionary prompt, which warns of possible problems.

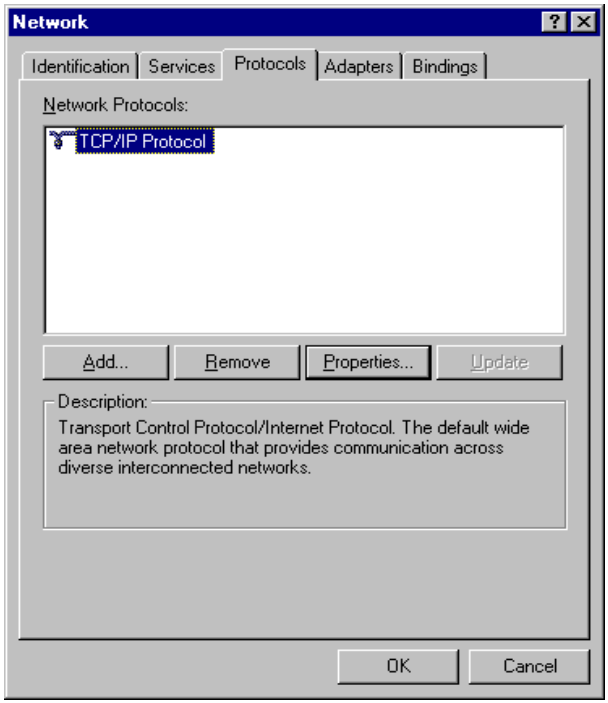
6 To restart the computer, click Yes.

Setting communications protocols

To configure TCP/IP information

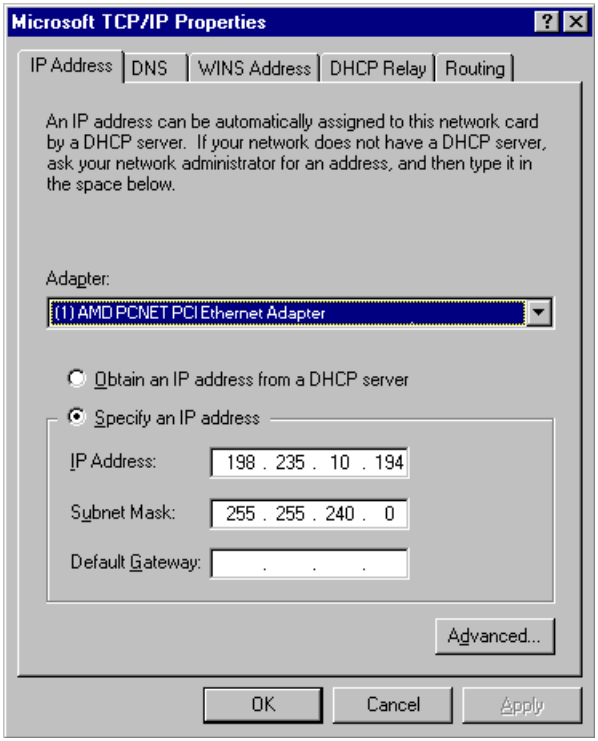
1. Start the computer with Windows NT and log on to the server as Administrator.
2. From the Windows Start menu, choose Settings > Control Panel, and then double-click the Network icon.

   Result: The Network Settings Panel appears.
3. Click the Protocols tab, and then select TCP/IP Protocol from the list of installed network software.



4 Click Properties.

Result: The TCP/IP properties panel appears.



ELAN TCP/IP settings

5 From the Adapter drop-down list, select the ELAN network card, click Specify an IP address, and then enter the customer-supplied ELAN IP Address and Subnet Mask.

Note: If the server has identical ELAN and CLAN network interface cards, you can determine each card by its MAC address as follows:

a. Open the Command Prompt and execute the following command:

```
ipconfig/all
```

Result: The windows NT IP Configuration appears, followed by the configuration for each adapter. The Physical Address is the MAC address of each adapter.

b. Check the Physical Address against the “MAC address table” on page 11.

c. To exit the Command Prompt window, execute the following command:

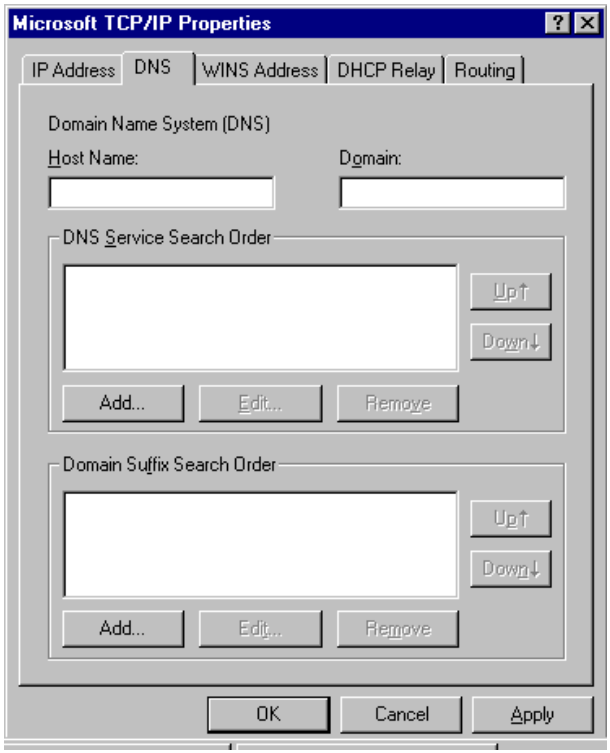
```
exit
```

CLAN TCP/IP settings

6 Select the CLAN card from the Adapter drop-down list, click Specify an IP address, and enter the customer-supplied CLAN IP Address and Subnet Mask.

a. If DNS settings are required, click the DNS tab on the Microsoft TCP/IP properties panel.

Result: The Domain Name System (DNS) properties page appears.



b. Type the DNS host name in the Host Name box. This name must match the computer name.

c. Type the customer-supplied DNS domain name in the Domain box.

d. Type the customer-supplied DNS server IP address in the DNS Server Search Order box.

e. Click Add.

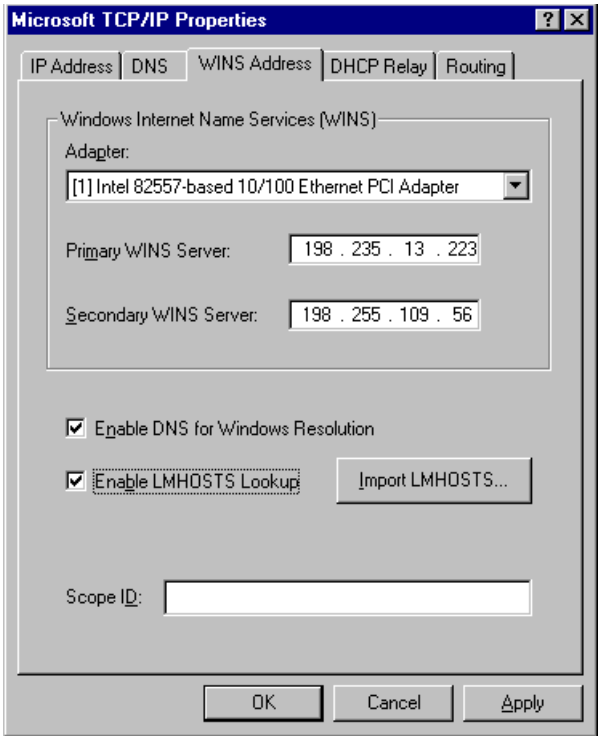
f. Type the customer-supplied DNS suffix names in the DNS Suffix Search Order box.

g. Click Add.

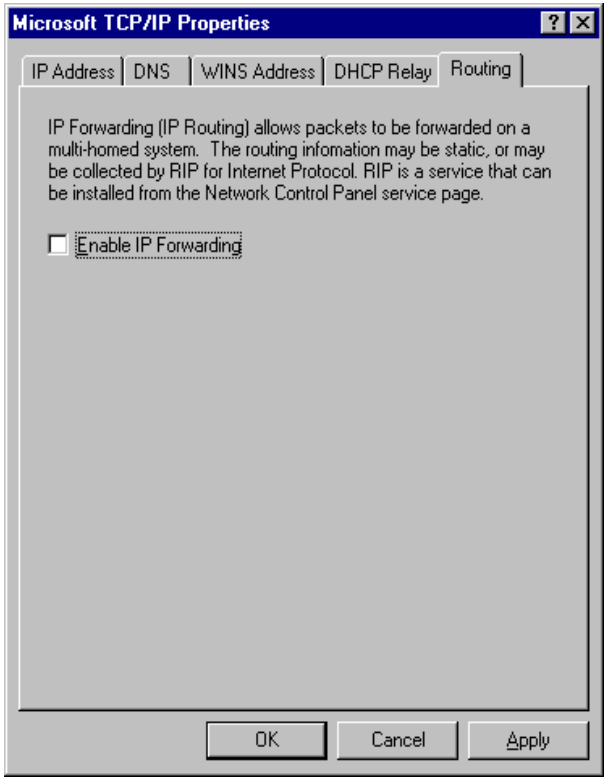
h. If WINS settings are required, click the WINS Address tab on the Microsoft TCP/IP Properties panel to display the WINS Address properties page.

i. Enter the primary and secondary WINS server address for the CLAN network card.

j. Check that both DNS for Windows Resolution and LMHOSTS Lookup are enabled.



k. If you want to ensure IP forwarding is not enabled, click the Routing tab on the Microsoft TCP/IP Properties panel.



l. Ensure that Enable IP Forwarding is not checked.

Note: This step ensures that IP Routing is disabled.

7 To save the changes, click Apply.

8 To close the Microsoft TCP/IP Properties panel, click OK.

9 To close the Network Control panel, click OK.

Note: The server must be shut down before new settings take effect. Shut down the server and restart it.

When you have completed the server configuration, run the PVI Minimal Configuration Compliance Check utility before installing the Symposium Call Center Server software. For details, see “PVI Minimal Configuration Compliance Check utility” on page 110.

After you have run the PVI Minimal Configuration Compliance Check utility, install the Symposium Call Center Server software on the D partition. During the installation, the database device files are installed starting with the F partition. For details, see the *Symposium Call Center Server Software Installation and Maintenance Guide*.

Chapter 5

Performing software maintenance

In this chapter

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Base software upgrades 102

Windows NT repair disk 103

Overview

Introduction

This chapter explains software maintenance on the server. This includes backing up the data, performing base software upgrades, and creating a Windows NT repair disk.

Database backup

Backing up data

To back up and restore data, the customer must supply and install a Windows NT 4.0 compatible tape backup device with the necessary drivers. The backup device must use an internal compression scheme with the capacity to hold the entire contents of the server database. Nortel Networks recommends the use of an SLR tape drive from Tandberg.

Full backup and restore

For Symposium Call Center Server Release 4.0, Nortel Networks does not support the full backup and restore process that was used in previous releases of Symposium Call Center Server. Full backup and restore is not available.

Database backup and restore

The database backup and restore process is supported for the server. To create a database backup, refer to the *Software Installation and Maintenance Guide*.

Base software upgrades

Upgrading the Windows NT Server 4.0 service pack

Any new Microsoft Windows NT Server 4.0 service pack releases will be subject to Nortel Networks Symposium Call Center Server Technology approval and recommendation.

Note: Not all servers support all NT service packs greater than Service Pack 3. Service pack 3 is not recommended as it allows memory leaks with SNMP. Check with the manufacturer of the server you are installing to determine which service packs are compatible.

To perform a service pack upgrade

1. Ensure that the Nortel Networks Technology group has approved the use of the new service pack.
2. Determine a time when the procedure can take place.
3. Back up the Symposium Call Center Server. See “Backing up data” on page 101.
4. Shut down the server.
5. Upgrade Windows NT to the new service pack following the instructions released with the service pack. See “Installing the Windows NT Server service pack” on page 58.
6. Restart the operating system. Symposium Call Center Server starts as soon as the operating system starts.
7. In case of a failure, uninstall the service pack following the recommendations released with the service pack.

Windows NT repair disk

Repair disk description

You should create a repair disk

- after all software has been installed and configured, and the server is running in a stable condition
- on a regular basis (after any maintenance activities are performed on the server or anytime the server configuration changes)

When you create a repair disk for Windows NT Server 4.0, a series of files is stored on a floppy disk and also in the Winnt/repair folder on drive C. The files are needed to repair Windows NT to the state that it was in when the repair disk was created. If the files contain a large amount of data, they might not fit on the floppy disk but will be available on the hard drive.

To create a repair disk

1. Power up the server.
2. Press Ctrl+Alt+Delete to display the logon window.
3. Log on to Windows NT as Administrator.
4. Insert a blank disk in the floppy drive.
5. Click Start, and then click Run.
6. When prompted, type **rdisk** and click OK.
7. Click Update Repair Info.
8. Click Yes to continue.

   Result: Setup prompts you to create the Repair disk.
9. Click Yes.
10. Click OK at the prompt.

    Result: The disk is formatted and configuration files are copied to the disk being created, and to the hard drive.
11. When complete, remove the disk from the floppy drive.
12. Click Exit on the Repair Disk Utility.

Chapter 6

Troubleshooting and support

In this chapter

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General troubleshooting procedures	108
Using the support tools	110
Troubleshooting pcAnywhere problems	112
Disk partitioning issues	114

Overview

Introduction

This chapter describes how to troubleshoot the server and what support is available. It includes general troubleshooting procedures.

Nortel Networks support

Technical support

The following types of support are available for the Platform Vendor Independence solution:

Software-only support

This support is available for customers who purchase Symposium Call Center Server Release 4.0 software to install on a third-party Windows NT server platform.

Nortel Networks provides support for installation and configuration questions concerning the Operating System and pcAnywhere. pcAnywhere is supplied with the Symposium Call Center Server software package.

Nortel Networks also provides support regarding server connections with external devices.

In this case, there is no hardware support for the server. Customers should forward all related hardware issues to their hardware vendor. The hardware vendor should supply the appropriate hardware diagnostic software.

Software and hardware support

This support is available to customers who purchase Symposium Call Center Server Release 4.0 software and a Nortel Networks platform. Nortel Networks is the supplier of the server.

Nortel Networks provides support for installation and configuration questions for the Operating System and pcAnywhere, which are supplied with the Symposium Call Center Server software package.

Nortel Networks also provides support regarding server connections with external devices.

In this case, Nortel Networks also provides support for the server. Customers should forward all related hardware issues to Nortel Networks, which can supply the appropriate level of hardware support.

General troubleshooting procedures

Hardware problem

All hardware diagnostics are the responsibility of the platform manufacturer, and are not included in this guide. This section reviews and suggests remedies for problems that could impede normal operation. Always check with the manufacturer's instructions and recommendations before you perform any hardware-related procedure.

Network-related error

If the problem is a network-related error, determine if the server has enough memory and hard disk drive capacity. Consult your network operating system manual.

Connections

Verify that all cables and boards are securely plugged into their appropriate connectors or slots.

Added options

Remove all added options, and change only one component at a time.

Power cords

Unplug the server's power cord(s), wait 20 seconds, plug the power cord(s) in again, and restart the system.

If there is a hardware error

1. Log users off the LAN and power down the server. Disconnect the power cord and unplug the telephone cables.
2. Simplify the server configuration to a monitor, one floppy and one hard disk drive, and a keyboard and mouse. Remove all third-party options, and

reinstall options one at a time, checking the system after each installation. Reconnect the power cord and telephone cables.

3 Restart the system. If the system does not function, refer to the following section, “If the system does not power on.”

If the system does not power on

1 Ensure that all cables and power cords are firmly plugged into their proper receptacles.

2 Ensure that all parts of the system are powered on and properly adjusted.

3 If the server is plugged into a switched multiple-outlet box, ensure that the switch on the outlet box is powered on.

4 Plug a different electrical device (such as a printer) into the power outlet, and power it on.

5 Unplug the power cord, wait 20 seconds, plug the power cord in again, and restart the system.

6 If the system still does not function, contact the server manufacturer.

Using the support tools

PVI Minimal Configuration Compliance Check utility

This is a stand-alone graphical user interface utility that can be run on the server after the hard drives are partitioned and before the Symposium Call Center Server software is installed. The utility checks for minimal server configuration requirements to ensure that Symposium Call Center Server software can be installed.

To start the PVI Compliance Check

1. Place the Platform Support CD-ROM into the CD-ROM drive.
2. From the desktop, select My Computer > CD-ROM (Drive E).
3. In the CD-ROM root directory, double-click PVICHECK.EXE

   Result: The program searches for the following requirements:

   - minimum 256 Mbytes RAM size
   - minimum drive C partition of 2 Gbytes
   - minimum drive D partition of 2 Gbytes
   - drive E is a CD-ROM drive
   - minimum drive F partition of 4 Gbytes
   - listing of all additional drives and sizes beyond C, D, and F
   - Windows NT Server 4.0 is installed on drive C

   Warnings and messages that suggest corrective actions appear if the required conditions are not met.

Computer Name Synch

If you change the computer name after installing the Symposium Call Center Server, use this utility to synchronize the Symposium Call Center Server name and the current computer name. For details, see the *Symposium Call Center Server Software Installation and Maintenance Guide*.

Feature report utility

This utility enables you to view and modify switch parameters. It also enables you to view other system information and a list of installed features. For details, see the *Symposium Call Center Server Software Installation and Maintenance Guide*.

Utilities for Nortel Networks distributors

Distributors of Nortel Networks products can access Symposium Call Center Server utilities from the Nortel Networks web site at www.nortel-sccs.com. Distributors must register before accessing the utilities.

Troubleshooting pcAnywhere problems

Symptom

A blue screen appears during restart after you have installed pcAnywhere version 9.2.

Probable cause

The server has an incompatible video driver.

Action

1. Press Reset to restart the server.
2. When prompted, select Windows NT VGA.
3. When the message `Last known configuration` appears, press Reset again.
4. Repeat steps 2 and 3 again. When prompted, select Windows NT VGA.
5. Allow the server to start with the last known good configuration. After three failed restart attempts, pcAnywhere switches to the Fault Tolerant start mode.
6. If you see the message `A video compatibility problem caused pcAnywhere to switch to the "Compatibility" video mode`, click OK.

   Note: For additional information on the next three steps, see the troubleshooting section of the *Software Installation and Maintenance Guide*.
7. Uninstall pcAnywhere.
8. Change the video driver.
9. Install pcAnywhere 9.2. (Also see "Preparing the server for remote access with pcAnywhere" on page 76.)
10. If the problem is not resolved, contact your Nortel Networks customer support representative.

Note: You can get information on compatible video drivers for your server from the server vendor's web site.

Symptom

A message informs you that there is not enough disk space when you try to install pcAnywhere.

Action

During the setup procedure, for Setup Type, select Custom instead of Typical. This enables you to select another drive where pcAnywhere will be installed. The pcAnywhere software is normally installed on the C partition of a third-party Windows NT server.

Disk partitioning issues

Overview

The Symposium Call Center Server configurations used for third-party Windows NT servers require that all optional drives be configured with extended partitions.

To confirm the disk partitions

Proceed as follows to confirm that you have a valid configuration:

1. Press Ctrl+Alt+Delete to display the Windows NT logon box.
2. Log on to the system as Administrator.
3. Click Start > Programs > Administrative Tools (Common) > Disk Administrator.
4. When Disk Administrator is running, examine the list of disk drives. Ensure that the operational drives (all disks except drive C) are partitioned as logical drives and not primary partitions. You can determine whether a drive is primary by examining its color. If the drive has the same color as drive C: (that is, dark blue), it is a primary partition. If the drive has a different color (that is, light blue), it is a logical drive.
5. Check that the order of drive letter assignments is the same as the order specified in this base configuration guide. See “Disk partitioning for new installations” on page 22.

If all of your optional drives are configured as logical partitions and are in the correct order, you can skip the remainder of this section on disk partitioning issues.

Problems during conversion

This section pertains to problems that you may encounter when upgrading a server from Symposium Call Center Server Release 1.5 to Release 4.0.

During the operating system upgrade from Windows NT 3.51 to Windows NT 4.0, the operating system installation software may specify that NT 3.51 is located on the wrong drive. For example, if NT 3.51 was installed in the D:\winnt35 directory during upgrade to NT 4.0, the NT installation software may suggest upgrading Windows into the G:\winnt35 directory. If this happens, follows these steps.

To ensure that drive letter assignments are in the correct order

1. Accept the proposed destination and continue with the operating system upgrade.
2. Do not start the Symposium Call Center Server installation until you confirm that the optional drives have the correct drive letter assignments. See “Confirming the Disk Partitions” in this section to check the order of drive letter assignments. If the drive letter assignments are in the wrong order, use Disk Administrator to correct the order.
3. To assign the drive letters to match the correct order in Disk Administrator, proceed as follows:
   a. Ensure you have previously committed any changes to disk.
   b. Right-click the selected partition, choose Assign Drive Letter, and choose a letter from the drop-down list.
   c. Click OK.
   d. Repeat from Step b above for any remaining partitions.
   e. Commit changes to disk again.
4. Install Symposium Call Center Server.

Glossary

A

accelerator key

A key on a phoneset that an agent can use to place a call quickly. When an agent presses an accelerator key, the system places the call to the configured number associated with the key. For example, if an agent presses the Emergency key, the system places a call to the agent's supervisor.

access class

A collection of access levels that defines the actions a member of the access class can perform within the system. For example, a member of the Administrator access class might be given a collection of Read/Write access levels.

access level

A level of access or permission given to a particular user for a particular application or function. For example, a user might be given View Only access to historical reports.

ACCESS link

A communication channel between the Symposium Call Center Server and Meridian Mail.

ACCESS voice port

A Meridian Mail voice port that is controlled by the ACCESS link.

ACD call

See Automatic call distribution call.

ACD-DN

See Automatic call distribution directory number.

ACD routing table

See Automatic call distribution routing table.

acquired resource
A resource configured on the switch that is under the control of the Symposium Call Center Server. Resources must be configured with matching values on both the switch and the Symposium Call Center Server.

activated script
A script that is processing calls or is ready to process calls. Before you can activate a script, you must first validate it.

activity code
A number that an agent enters on his or her phoneset during a call. Activity codes provide a way of tracking the time agents spend on various types of incoming calls. For example, the activity code 720 might be used to track sales calls. Agents can then enter 720 on their phonesets during sales calls, and this information can be generated in an Activity Code report.

administrator
A user who is responsible for maintaining the Symposium Call Center Server.

agent
A user who is responsible for handling customer calls.

agent login ID
A unique identification number assigned to a particular agent. The agent uses this number when logging on. The agent ID is not associated with any particular phoneset.

agent to skillset assignment
A matrix that, when you run it, sets the priority of one or more agents for a skillset. Agent to skillset assignments can be scheduled.

agent to supervisor assignment
A definition that, when you run it, assigns one or more agents to specific supervisors. Agent to supervisor assignments can be scheduled.

application

1. A logical entity that represents a Symposium Call Center Server script for reporting purposes. The master script and each primary script have an associated application.The application has the same name as the script it represents. 2. A program that runs on a computer.

application program interface

A set of routines, protocols, and tools that programmers use to develop software applications. APIs simplify the development process by providing commonly used programming procedures.

associated supervisor

A supervisor who is available for an agent if the agent's reporting supervisor is unavailable. *See also* reporting supervisor.

Automatic call distribution call

A call to an ACD-DN. ACD calls are distributed to agents in an ACD group based on the ACD routing table on the switch.

Automatic call distribution directory number

DNs associated with an ACD group. Calls made to these DNs are distributed to agents belonging to the group, based on the ACD routing table on the switch.

Automatic call distribution routing table

A table configured on the switch that contains a list of ACD-DNs used to define routes for incoming calls. This ensures that incoming calls not processed by Symposium Call Center Server will be queued to ACD groups and handled by available agents.

C

call age

The amount of time a call was waiting in the system before being answered by an agent.

call destination

The site to which an outgoing network call is sent. *See also* call source.

call intrinsic

A script element that stores call-related information assigned when a call enters the Symposium Call Center Server. *See also* intrinsic, skillset intrinsic, time intrinsic, traffic intrinsic.

call presentation class

A collection of preferences that determines how calls are presented to an agent. A call presentation class specifies whether a break time between calls is allowed, whether an agent can put DN calls on hold for incoming ACD calls, and whether an agent phoneset displays that the agent is reserved for a network call.

call priority

A numerical value assigned in a script that defines the relative importance of a call. If two calls are in the queue when an agent becomes available, and one call is queued with a higher priority than the other, the agent receives the higher priority call first. *See also* skillset priority.

call source

The site from which an incoming network call originates. *See also* call destination.

call treatment

A script element that enables you to provide handling to a call while it is waiting to be answered by a call center agent. For example, a caller can hear a recorded announcement or music while waiting for an agent.

call variable

A script variable that applies to a specific call. A call variable follows the call through the system and is passed from one script to another with the call. *See also* global variable, variable.

Calling Line Identification

This is an optional service that identifies the telephone number of the caller. This information can then be used to route the call to the appropriate agent or skillset. The CLID can also be displayed on an agent’s phoneset.

CDN

See controlled directory number.

CLAN
See Customer local area network.

CLID
See Calling Line Identification.

client
The part of Symposium Call Center Server that runs on a personal computer or workstation and relies on the server to perform some operations. *See also* server.

command
A building block used with expressions, variables, and intrinsics to create scripts. Commands perform distinct functions, such as routing a call to a specific destination, playing music to a caller, or disconnecting a caller.

controlled directory number
A special directory number that allows calls arriving at the switch to be queued when the CDN is controlled by an application such as Symposium Call Center Server. When a call arrives at this number, the switch notifies the application and waits for routing instructions, which are performed by scripts in Symposium Call Center Server.

Customer local area network
The LAN to which your corporate services and resources connect. The Symposium Call Center Server and client both connect to the CLAN. Third-party applications that interface with the server also connect to this LAN.

D

DBMS
Database Management System

deactivated script
A script that does not process any new calls. If a script is in use when it is deactivated, calls continue to be processed by the script until they are completed.

default activity code

The activity code that is assigned to a call if an agent does not enter an activity code manually, or when an agent presses the activity code button twice on his or her phoneset. Each skillset has a defined default activity code.

default skillset

The skillset to which calls are queued if they have not been queued to a skillset or a specific agent by the end of a script.

desktop user

A configured user who can log on to the Symposium Call Center Server from a client PC.

destination site

The site to which an outgoing network call is sent. *See also* source site.

DHCP

See dynamic host configuration protocol.

Dial-Up Networking

See Remote Access Services.

Dialed Number Identification Service

An optional service that allows Symposium Call Center Server to identify the phone number dialed by the incoming caller.

An agent can receive calls from customers calling in on different DNISs and, if the DNIS is displayed on the phoneset, can prepare a response according to the DNIS.

directory number

The number that identifies a phoneset on a switch. The directory number (DN) can be a local extension (local DN), a public network telephone number, or an automatic call distribution directory number (ACD-DN).

directory number call

A call that is presented to the DN key on an agent’s phoneset.

display threshold
A threshold used in real-time displays to highlight a value below or above the normal range.

DN
See directory number.

DN call
See directory number call.

DNIS
See Dialed Number Identification Service.

dynamic host configuration protocol
A protocol for dynamically assigning IP addresses to devices on a network.

dynamic link library
A library of executable functions or data that can be used by a Windows application. Typically, a DLL provides one or more particular functions and a program accesses the functions by creating either a static or dynamic link to the DLL. A DLL can be used by several applications at the same time.

E

ELAN
See embedded local area network.

embedded local area network
A dedicated Ethernet TCP/IP LAN that connects the Symposium Call Center Server and the switch.

Emergency key
A key on an agent's phoneset that, when pressed by an agent, automatically calls his or her supervisor to notify the supervisor of a problem with a caller.

event

1. An occurrence or action on the Symposium Call Center Server, such as the sending or receiving of a message, the opening or closing of an application, or the reporting of an error. Some events are for information only, while others can indicate a problem. Events are categorized by severity: information, minor, major, and critical. 2. An action generated by a script command, such as queuing a call to a skillset or playing music.

expression

A building block used in scripts to test for conditions, perform calculations, or compare values within scripts. *See also* logical expression, mathematical expression, relational expression.

F

filter timer

The length of time after the system unsuccessfully attempts to route calls to a destination site, before that site is filtered out of a routing table.

first-level threshold

The value that represents the lowest value of the normal range for a statistic in a threshold class. The system tracks how often the value for the statistic falls outside this value.

G

global settings

Settings that apply to all skillsets or IVR ACD-DNs that are configured on your system.

global variable

A variable that contains values that can be used by any script on the system. The value of a global variable can only be changed in the Script Variable Properties sheet. It cannot be changed in a script. *See also* call variable, variable.

I

Incalls key

The key on an agent phoneset to which incoming ACD and Symposium Call Center Server calls are presented.

Interactive voice response

An application that allows telephone callers to interact with a host computer using prerecorded messages and prompts.

Interactive voice response ACD-DN

A directory number that routes a caller to a specific IVR application. An IVR ACD-DN must be acquired for non-integrated IVR systems.

Interactive voice response event

A voice port login or logout. An IVR event is pegged in the database when a call acquires or deacquires a voice port.

Internet Protocol address

An identifier for a computer or device on a TCP/IP network. Networks use the TCP/IP protocol to route messages based on the IP address of the destination. For customers using NSBR, site IP addresses must be unique and correct. The format of an IP address is a 32-bit numeric address written as four values separated by periods. Each value can be 0–255. For example, 1.160.10.240 could be an IP address.

intrinsic

A word or phrase used in a script to gain access to system information about skillsets, agents, time, and call traffic that can then be used in formulas and decision-making statements. *See also* call intrinsic, skillset intrinsic, time intrinsic, traffic intrinsic.

IP address

See Internet Protocol address.

IVR

See Interactive voice response.

IVR ACD-DN

See Interactive voice response ACD-DN.

IVR event

See Interactive voice response event.

IVR port
See voice port.

L

LAN
See Local area network.

Local area network
A computer network that spans a relatively small area. Most LANs connect workstations and personal computers and are confined to a single building or group of buildings.

local call
A call that originates at the local site. *See also* network call.

local skillset
A skillset that can be used at the local site only. *See also* network skillset, skillset.

logical expression
A symbol used in scripts to test for different conditions. Logical expressions are AND, OR, and NOT. *See also* expression, mathematical expression, relational expression.

M

M1
Meridian 1 switch

master script
The first script executed when a call arrives at the Symposium Call Center Server. A default master script is provided with Symposium Call Center Server, but it can be customized by an authorized user. It can be deactivated but not deleted. *See also* network script, primary script, script, secondary script.

mathematical expression
An expression used in scripts to add, subtract, multiply, and divide values. Mathematical expressions are addition (+), subtraction (-), division (/), and multiplication (*). *See also* expression, logical expression, relational expression.

Meridian Link Services
A communications facility that provides an interface between the switch and a third-party host application.

Meridian Mail
A Nortel Networks product that provides voice messaging and other voice and fax services.

Meridian MAX
A Nortel Networks product that provides call processing based on ACD routing.

MLS
See Meridian Link Services.

MM
See Meridian Mail.

MSL-100
Meridian Series 100 switch

music route
A resource installed on the switch that provides music to callers while they wait for an agent.

N

NACD call
A call that arrives at the server from a network ACD-DN.

NCC
See Network Control Center.

network call
A call that originates at another site in the network. *See also* local call.

Network Control Center
The server on a Symposium Call Center Server system where NSBR is configured and where communication between servers is managed.

network script
The script that is executed to handle error conditions for Symposium Call Center Server calls forwarded from one site to another, for customers using NSBR. The network script is a system-defined script provided with Symposium Call Center Server, but it can be customized by an authorized user. It can be deactivated but not deleted. *See also* master script, primary script, script, secondary script.

Network Skill-Based Routing
An optional feature with Symposium Call Center Server that provides skill-based routing to multiple networked sites.

network skillset
A skillset that is common to every site on the network. Network skillsets must be created at the Network Control Center (NCC).

night mode
A skillset state in which the server does not queue incoming calls to the skillset, and in which all queued calls are given night treatment. A skillset goes into night mode automatically when the last agent logs off, or the administrator can put it into night mode manually. *See also* out-of-service mode, transition mode.

NPA
See Number Plan Area.

NSBR
See Network Skill-Based Routing.

Number Plan Area
Area code

O

object linking and embedding
A compound document standard that enables you to create objects with one application and then link or embed them in a second application.

ODBC
See Open Database Connectivity.

OEM
Original equipment manufacturer

OLE
See object linking and embedding.

Open Database Connectivity
A Microsoft-defined database application program interface (API) standard.

out-of-service mode
A skillset state in which the skillset does not take calls. A skillset is out of service if there are no agents logged on or if the supervisor puts the skillset into out-of-service mode manually. *See also* night mode, transition mode.

out-of-service skillset
A skillset that is not taking any new calls. While a skillset is out of service, incoming calls cannot be queued to the skillset. *See also* local skillset, network skillset, skillset.

P

PBX
See private branch exchange.

pegging
The action of incrementing statistical counters to track and report on system events.

pegging threshold
A threshold used to define a cut-off value for statistics such as short call and service level. Pegging thresholds are used in reports.

PEP
See Performance Enhancement Package.

Performance Enhancement Package

A Symposium Call Center Server supplementary software application that enhances the functionality of previously released software by improving performance, adding functionality, or correcting a problem discovered since the original release.

personal directory number

A DN on which an agent can be reached directly, usually for private calls.

phoneset

The physical device, connected to the switch, to which calls are presented. Each agent and supervisor must have a phoneset.

phoneset display

The display area on an agent's phoneset where information about incoming calls can be communicated.

Position ID

A unique identifier for a phoneset, used by the switch to route calls to the phoneset.

primary script

A script that is executed or referenced by the master script. A primary script can route calls to skillsets, or it can transfer routing control to a secondary script. *See also* master script, network script, script, secondary script.

private branch exchange

A telephone switch, typically used by a business to service its internal telephone needs. A PBX usually offers more advanced features than are generally available on the public network.

R

RAID

See Redundant Array of Inexpensive Disks.

RAN

recorded announcement

RAN route
See recorded announcement route.

RAS
See Remote Access Services.

recorded announcement route
A resource installed on the switch that offers a recorded announcement to callers.

Redundant Array of Inexpensive Disks
A category of disk drives that employs two or more drives in combination for fault tolerance and performance.

relational expression
An expression used in scripts to test for different conditions. Relational expressions are less than (<), greater than (>), less than or equal to (< =), greater than or equal to (> =), and not equal to (< >). *See also* expression, logical expression, mathematical expression.

Remote Access Services
A feature built into Windows NT and Windows 95 that enables users to log on to an NT-based LAN using a modem, X.25 connection, or WAN link. This feature is also known as Dial-Up Networking.

reporting supervisor
The supervisor who has primary responsibility for an agent. When an agent presses the Emergency key on the phoneset, the emergency call is presented to the agent's reporting supervisor. *See also* associated supervisor.

round robin routing table
A routing table that queues the first call to the first three sites in the routing table, then the second three sites, then the third three sites, and so on, until an agent is reserved at one of the sites. *See also* sequential routing table.

route
A group of trunks. Each trunk carries either incoming or outgoing calls to the switch. *See also* music route, RAN route.

router
A device that connects two LANs. Routers can also filter messages and forward them to different places based on various criteria.

routing table
A table that defines how calls are routed to the sites on the network. *See also* round robin routing table, sequential routing table.

S

sample script
A script that is installed with the Symposium Call Center Server client. Sample scripts are stored as text files in a special folder on the client. The contents of these scripts can be imported or copied into user scripts to create scripts for typical call center scenarios.

SCM
See Service Control Manager.

script
A set of instructions that relates to a particular type of call, caller, or set of conditions, such as time of day or day of week. *See also* master script, network script, primary script, secondary script.

script variable
See variable.

second-level threshold
The value used in display thresholds that represents the highest value of the normal range for a given statistic. The system tracks how often the value for the statistic falls outside this value.

secondary script
Any script (other than a master, network, or primary script) that is referenced from a primary script or any other secondary script. There is no pegging of statistics for actions occurring during a secondary script. *See also* master script, network script, primary script, script.

sequential routing table
A routing table method that always queues a call to the first three active sites in the routing table. *See also* round robin routing table.

server
A computer or device on a network that manages network resources. Examples of servers include file servers, print servers, network servers, and database servers. The Symposium Call Center Server is used to configure the operations of the call center. *See also* client.

service
A process that adheres to a Windows NT structure and requirements. A service provides system functionality.

Service Control Manager
A Windows NT process that manages the different services on the PC.

service level
The percentage of incoming calls answered within a configured number of seconds.

service level threshold
A parameter that defines the number of seconds within which incoming calls should be answered.

Simple Network Management Protocol
A set of protocols for managing complex networks. SNMP works by sending messages, called protocol data units (PDUs), to different parts of a network and then analyzing the responses.

site
1. A system using Symposium Call Center Server that can be accessed using SMI. 2. A system using Symposium Call Center Server and participating in Network Skill-Based Routing.

skillset
A group of capabilities or knowledge required to answer a specific type of call. *See also* local skillset, network skillset.

skillset intrinsic

A script element that inserts information about a skillset in a script. Skillset intrinsics return values such as skillsets, integers, and agent IDs. These values are then used in queuing commands. *See also* call intrinsic, intrinsic, time intrinsic, traffic intrinsic.

skillset priority

An attribute of a skillset assignment that determines the order in which calls from different skillsets are presented to an agent. When an agent becomes available, calls might be waiting for several of the skillsets to which the agent belongs. The server presents the call queued for the skillset for which the agent has the highest priority.

SNMP

See Simple Network Management Protocol.

source site

The site from which an incoming network call originates. *See also* destination site.

standby

In skillset assignments, a property that grants an agent membership in a skillset, but makes the agent inactive for that skillset.

supervisor

A user who manages a group of agents. *See also* associated supervisor, reporting supervisor.

switch

The hardware that receives incoming calls and routes them to their destination.

switch resource

A device that is configured on the switch. For example, a CDN is configured on the switch, and then is used as a resource with Symposium Call Center Server. *See also* acquired resource.

Symposium Call Center Server call

A call to a CDN that is controlled by the Symposium Call Center Server. The call is presented to the Incalls key on an agent's phoneset.

system-defined scripts

The Master_Script and the Network_Script (if NSBR is enabled).These scripts can be customized or deactivated by a user, but cannot be deleted. These scripts are the first scripts executed for every local or network call arriving at the call center.

T

target site

See destination site.

TCP/IP

See Transmission Control Protocol/Internet Protocol.

telephony

The science of translating sound into electrical signals, transmitting them, and then converting them back to sound. The term is used frequently to refer to computer hardware and software that perform functions traditionally performed by telephone equipment.

threshold

A value for a statistic at which system handling of the statistic changes.

threshold class

A set of options that specifies how statistics are treated in reports and real-time displays. *See also* display threshold, pegging threshold.

time intrinsic

A script element that stores information about system time, including time of day, day of week, and week of year. *See also* call intrinsic, intrinsic, skillset intrinsic, traffic intrinsic.

Token Ring

A PC network protocol developed by IBM. A Token Ring network is a type of computer network in which all the computers are arranged schematically in a circle.

traffic intrinsic

An intrinsic that inserts information about system-level traffic in a script. *See also* call intrinsic, intrinsic, skillset intrinsic, time intrinsic.

transition mode

A skillset state in which the server presents already queued calls to a skillset. New calls queued to the skillset are given out-of-service treatment. *See also* night mode, out-of-service mode.

Transmission Control Protocol/Internet Protocol

The communication protocol used to connect devices on the Internet. TCP/IP is the standard protocol for transmitting data over networks.

treatment

See call treatment.

trunk

A communications link between a PBX and the public central office, or between PBXs. Various trunk types provide services such as Direct Inward Dialing (DID trunks), ISDN, and Central Office connectivity.

U

user-created script

A script that is created by an authorized user on the Symposium Call Center Server system. Primary and secondary scripts are user-created scripts.

user-defined script

A script that is modified by an authorized user on the Symposium Call Center Server system.

utility

A program that performs a specific task, usually related to managing system resources. Operating systems contain a number of utilities for managing disk drives, printers, and other devices.

V

validation

The process of checking a script to ensure that all the syntax and semantics are correct. A script must be validated before it can be activated.

variable

A placeholder for values calculated within a script, such as CLID. Variables are defined in the Script Variable Properties sheet and can be used in multiple scripts to determine treatment and routing of calls entering the Symposium Call Center Server. *See also* call variable, global variable.

voice port

A connection from a telephony port on the switch to a port on the IVR system.

W

WAN

See Wide area network.

Wide area network

A computer network that spans a relatively large geographical area. Typically, a WAN consists of two or more local area networks (LANs). The largest WAN in existence is the Internet.

workload scenarios

Sets of configuration values defined for typical patterns of system operations. Five typical workload scenarios (entry, small, medium, large, and upper end) are used in the Capacity Assessment Tool for capacity analysis for the Symposium Call Center Server.

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Reader Response Form

Symposium Call Center Server
Product release 4.0
Platform Vendor Independence Base
Configuration Guide

Tell us about yourself:

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   _____

   _____

   _____

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   _____

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6. How could we improve this book?

   _____

   _____

   _____

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Reader Response Form

Reader Response Form

Symposium Call Center Server

Platform Vendor Independence Base Configuration Guide

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